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Text-Book
of
Osteopathy

**American College of
Mechano-Therapy
Chicago :: :: Illinois**

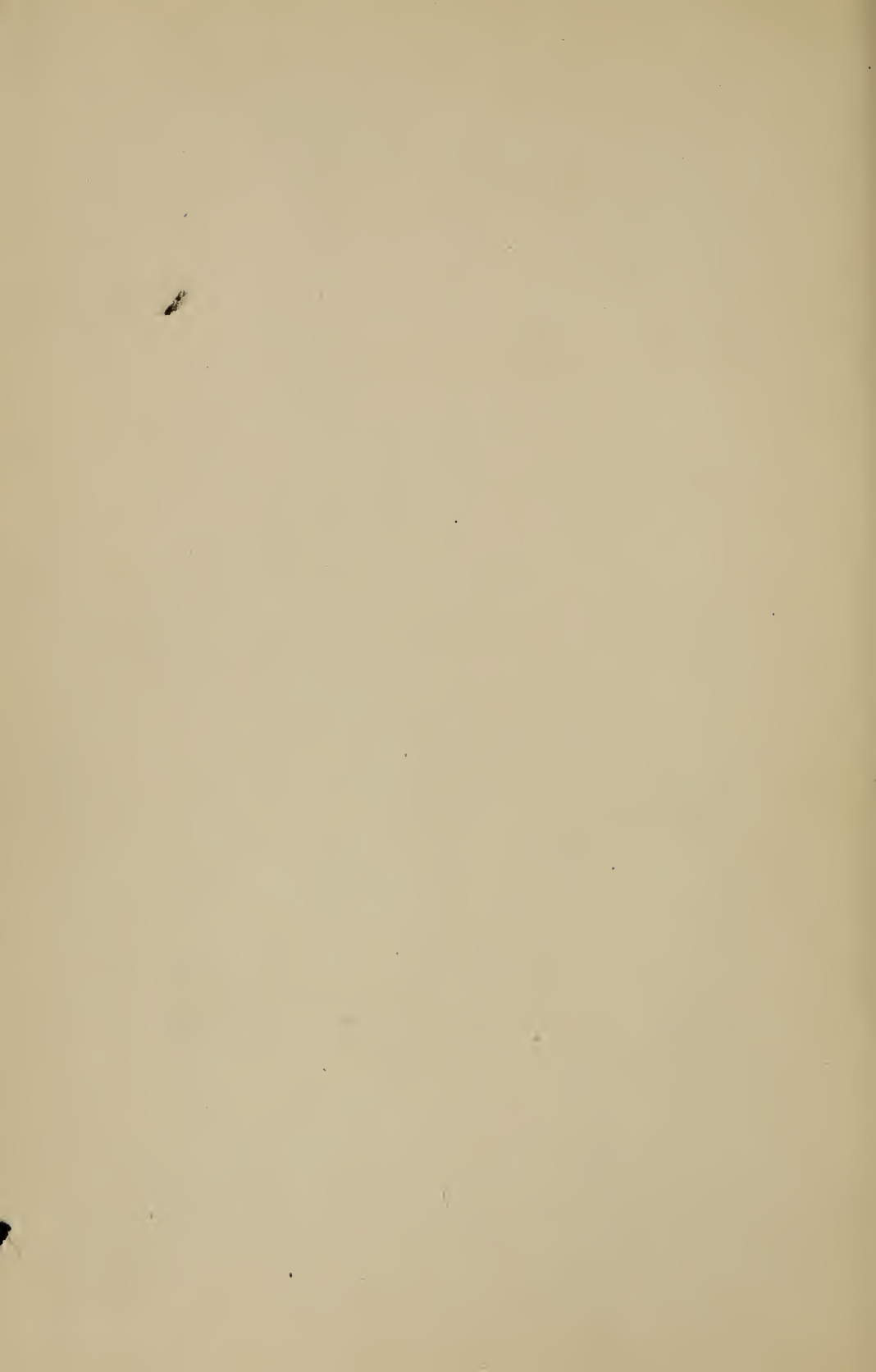


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Foreword

This treatise was written with a view of presenting to those interested in Physiological Therapeutics, and particularly in that branch known as Mechano-Therapy, a concise resume of the Practice of Osteopathy as now carried on by its foremost practitioners.

Osteopathy derives its name and meaning from the words "Osteo," signifying bone, and "pathos," suffering, feeling, or disease. The term therefore, presupposes that disease is caused by some pathological process due to faulty position or adjustment of bones. This theory regarding the etiology of disease has never been taken seriously by the scientific world, and indeed, it is a fact that the rank and file of Osteopaths are just as luke-warm in the defense of same as the present-day Homeopaths are in the defense of their erstwhile slogan: "Similia similibus curantur."

We anticipate the reader's question: "What, then, is responsible for the popularity of Osteopathy?" The answer is plain: "The Manual Manipulations incident to the practice of that profession." These manipulations are known under various names, such as Mano-Therapy, Massage, Swedish Movements, Medical Gymnastics, etc. Furthermore the failure of the Medical Profession to recognize and practice Physiological Therapeutics, has in a large measure contributed to the spread of Osteopathy in the United States. This is easily proven from the fact that in European Countries, especially

in Germany, where there are all kinds of "Naturopaths," "Kneipp-Curists," etc., Osteopathy is practically without representation, and simply for the reason that Mechano-Therapeutic principles have been utilized there for a long time.

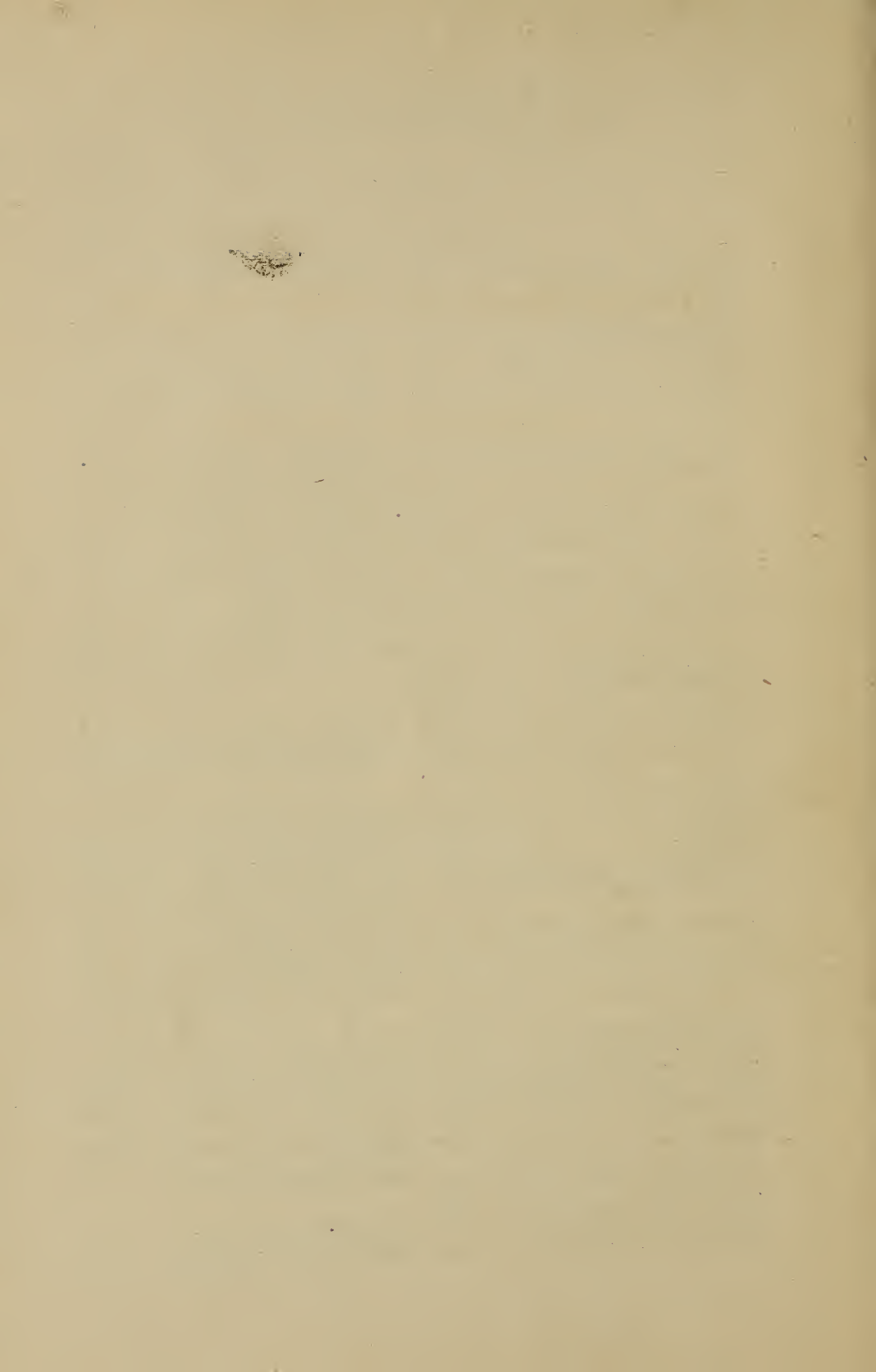
It must be regretted by everyone interested in the study of Physiological Therapeutics that a system of treatment, the practical application of which is so beneficial within certain limits, should have been given a name which will forever leave it without the pale of serious, scientific contemplation and which is bound to bury it along with all other panaceas and fads started by well-meaning men whose enthusiasm overbalanced their mental calibre.

We have endeavored to give herewith the scientific facts relating to etiology, symptomatology and diagnosis of disease, together with such manipulative treatment as is generally used by Osteopaths, thus rejecting the theory, but giving the Mechano-Therapeutic principles of Osteopathy.

May we express the hope that all those engaged in the work of Manipulative Healing and Physiological Therapeutics generally, may at all times remember the limitation as well as the advantages of their calling. As a rule, acute diseases, infectious, surgical and accidental, are not amenable to these methods, and should be left to the physician, not because he can cure them all, but because emergencies make artificial and surgical interference not only permissible but necessary in a certain percentage of cases.

INDEX

	Page.		Page.
Anemia	44	Jaundice, Catarrhal.....	53
Aphasia	27	Landmarks	9
Apoplexy	46	Laryngitis, Chronic.....	69
Arterio-Sclerosis	45	Liver Spots.....	64
Arthritis, Rheumatoid.....	92	Liver, General Treatment	
Asthma	73	of	65
Ataxia, Locomotor.....	43		
		Nephritis, Chronic Pa-	
Bright's Disease, Chronic..	85	renchymatous	85
Bronchitis, Chronic.....	76	Nephritis, Chronic, Inter-	
		stitial	85
Catarrh, Chronic Nasal....	68	Neuralgia, Facial	32
Centers, Osteopathic	7	Neuralgia, Intercostal	32
Chorea	28	Neurasthenia	35
Colic, Intestinal.....	58	Neuritis, Simple	33
Constipation	61	Neuritis, Multiple	34
		Neurosis, Occupation	37
Diabetes Mellitus.....	87		
Diarrhoea, Simple.....	60	Obesity	66
Dizziness	56	Osteopathic Treatment, Gen-	
Dropsy	52	eral	12
Dyspepsia, Chronic.....	54		
		Paralysis, Agitans	41
Enuresis	86	Paralysis, Facial	40
Epilepsy	30	Paralysis, General	42
Epistaxis	48	Paralysis, Infantile.	36
Examination, Osteopathic..	10	Pharyngitis, Chronic.....	70
		Pleurisy, Chronic.....	77
Gastric Catarrh, Chronic..	54	Pott's Disease	84
Goitre, Exophthalmic.....	71	Progressive Muscular Atro-	
Gout	93	phy	38
Hay Fever.....	75	Rheumatism, Acute and	
Headache, Migraine.....	27	Chronic	90
Heart, Palpitation of.....	49	Rheumatoid Arthritis.....	92
Heart, Valvular Disease of.	50		
Hemorrhoids	62	Sciatica	94
Hernia	81	Spinal Curvature.....	83
Hernia, S t r a n g u l a t i o n,		Spinal Nerves, Origin of... 10	
Treatment for.....	82		
Hernia, Cure of.....	82		
Indigestion, Intestinal....	59	Torticollis, Wry Neck.....	96
Infantile Paralysis.....	36	Tuberculosis, Pulmonary... 79	



Text-Book of Osteopathy

OSTEOPATHIC CENTERS.

The Spinal Column is divided, for convenience' sake, into six divisions: The Cervical, Brachial, Dorsal, Lumbar, Sacral and Coccygeal. The cervical embraces the four upper vertebrae; the brachial, the three lower cervical and first dorsal; the dorsal, the first dorsal and including the twelfth; the lumbar, the five lumbar vertebrae; the sacral, all of the sacrum; and the coccygeal, the last set of ganglia on the inner side of the coccyx.

The atlas is directly concerned with disturbances to the vaso-motors of the eye and ear, and with diseases of the face.

The axis and third cervical is a general vaso-motor center, through the superior cervical ganglion. It is a center for the side of the head, face, eye, nose, pharynx, tonsils and vessels of the brain.

The third, fourth and fifth cervical is the center for hiccoughs, as it is the origin of the phrenics.

The middle cervical ganglion is situated at the fifth and sixth cervicals, and is the center for the thyroid gland. It also augments the heart action.

The second to sixth dorsal are vaso-constrictors to the pulmonary blood vessels.

The third to seventh dorsal are vaso-motors to the arms, through the brachial plexus.

The heart, thyroid gland, inferior cervical ganglion, the vertebral and basilar arteries are supplied and controlled by the center of the seventh cervical and first dorsal.

The fibres augmenting the heart action come from the second, third, fourth and fifth dorsal. The first three control the regularity of the rhythm, while the fourth and fifth give regularity and strength to the beat.

The stomach center is located at the fourth dorsal on the right side.

The center for the ciliary muscle is found at the second and third dorsal. This is also the center for vomiting and for the bronchial tubes and bronchi.

The origin of the great splanchnic is between the sixth and tenth dorsal. The inhibitory, vaso-constrictor and secretory fibres are distributed to the stomach and small intestines.

The center for the liver is found between the eighth, ninth and tenth dorsal on the right side.

The center for the spleen is at the ninth and tenth dorsal on the left side. This is also the center for the uterus, through the hypogastric plexus.

The small intestine, kidney and ovary are controlled by the center in the eleventh and twelfth dorsal.

The second lumbar contains the center for parturition, micturition and the uterus.

The center for diarrhoea is situated at the second, third and fourth lumbar.

The pelvic plexus is formed by the separation of the hypogastric plexus into two halves on either side of the rectum. The center is located at the fourth and fifth lumbar. The fibres are distributed to the pelvic organs.

The anterior divisions of the sacral nerves are distributed to the rectum, bladder, sphincter ani, vagina and uterus.

The second and third sacral center controls the bladder; the fourth sacral, the vagina; and the fourth and fifth sacral, the sphincter ani.

Landmarks—The following landmarks are of importance in locating certain structures.

The sixth cervical spine will be found at the commencement of the esophagus and opposite the cricoid cartilage.

The seventh cervical spine is on a level with the apexes of the lungs.

The eighth thoracic spine is opposite the lowest level of the heart and the central tendon of the diaphragm.

The ninth thoracic spine is on a level with the cardiac opening of the stomach.

The lowest level of the lungs is found opposite the tenth thoracic spine.

The eleventh thoracic spine marks the level of the lower border of the spleen and upper border of the right kidney.

The renal vessels and pelvis of the kidney are on a level with the first lumbar spine.

The second lumbar spine is opposite the third portion of the duodenum and receptaculum chyli.

The third lumbar spine lies just above the umbilicus.

The fourth lumbar spine marks the bifurcation of the aorta and the crests of the ilium.

The junction of the first and second part of the rectum takes place at about the end of the coccyx.

In order to apply the treatment intelligently and to understand the lesions properly, it is necessary to know where the principal spinal nerves are located and their origin.

ORIGIN OF THE SPINAL NERVES.

The eight cervical nerves arise from the spinal cord above the level of the sixth cervical vertebra; the upper six dorsal, between the levels of the sixth cervical and fourth dorsal vertebrae; the lower six dorsal, between the fourth and eleventh dorsal vertebrae; the five lumbar, between the levels of the eleventh and twelfth thoracic vertebrae; and the sacral, between the last dorsal and first lumbar vertebrae.

OSTEOPATHIC EXAMINATION.

All cases should be carefully examined. Of all the methods used in arriving at a diagnosis, palpation or the use of the hand is the most important one. By palpation the Osteopath usually determines a dislocated bone, a contracted muscle or a tightening of a tendon or cartilage. The patient's clothing should be arranged so as to allow free access to the spine and thorax. The patient should

be requested to relax all tissues as much as possible and to offer no resistance unless asked to do so. To intelligently examine a spine, the operator should be thoroughly familiar with the outlines of the back. The normal spine is divided into four curves, named from above downward: The cervical curve, concave backward; dorsal curve, concave forward; lumbar curve, concavity backward; pelvic curve, concave forward.

Have the patient sit erect and stand behind him. Note the curves to see if they are normal or not, and also any inequalities on either side of the neck. Examine the glands of the neck for any enlargement.

Place the patient on the back and relax all muscles. Place one hand over the forehead and the other over the muscles in the back of the neck. Manipulate the neck muscles while rotating the head. Examine the tissues just beneath the skull, and the vertebrae on both sides of the neck. By allowing the fingers to move down the median line at the back of the neck, the spinous processes can be felt. By rotating the head and pressing the fingers along the transverse processes, anterior, posterior and lateral deviations may be discovered.

Have the patient lean forward, while sitting, and place his hands on his knees. Examine each vertebra carefully to determine any dislocation or subluxation.

Examine the chest and abdomen and palpate the various organs to detect any variations from the normal.

GENERAL OSTEOPATHIC TREATMENT.

Uses—A general treatment is indicated for the correction of nerve troubles and general circulation.

Patient reclines on table, lying on the side. Relax the tissues of the back by the following methods:

1. Stand in front of patient and grasp uppermost arm. Relax the tissues about the shoulders and down to the spine and back with the other hand. Hold the arm at the elbow, and using the joint as a lever, work the arm back and forth. By this means the spine is manipulated and any deviation corrected.



FIG. I. MANIPULATION OF SPINE.

2. With patient in same position, place one hand beneath the neck and grasp the occiput. Rest the other side of the patient's head against your breast, and apply traction to the neck and upper dorsal region.

3. Place one elbow on the hip and the other on the shoulder. Stretch the spine by extending the arms and stretching the hips away from the shoulder.

4. Manipulate the shoulder. Pull up the scapula with one hand, while with the other press the shoulder.

FIG. II. MANIPULATION OF THE SHOULDER.



5. Place one hand under patient's scapula and grasp the shoulder with the other hand. Then rotate the shoulder.

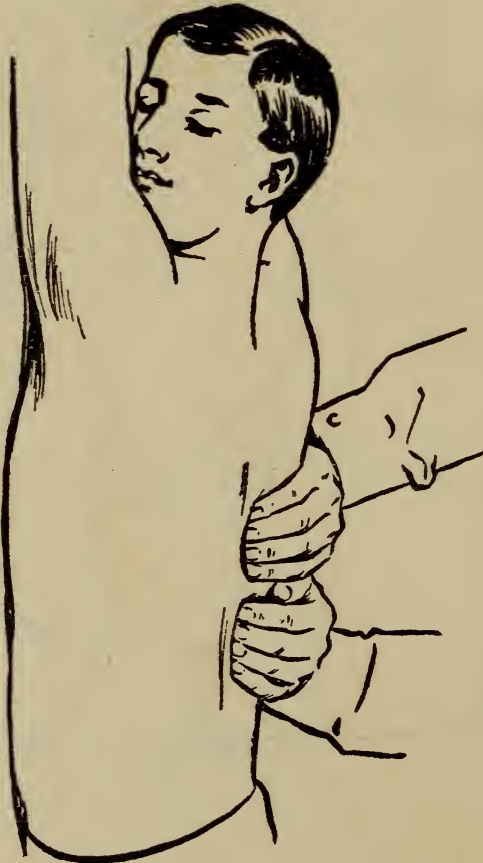
6. Manipulate the limbs by seizing the limb in both hands, relaxing all the tissues with a rotary movement of the hand.

7. Manipulate the spine by pulling it toward you, while patient is lying on his side with knees flexed and braced against you.

8. Turn patient on other side and repeat above treatment.

9. Place patient face downward, with toes extended and arms hanging down over the sides of the table. Describe a circular movement with the palms of the hands, at the same time apply pressure, to relax all contracted tissues of the back. Pull the muscles away from the spine with the fingers.

FIG. III. RELAXING TISSUES OF THE BACK.



10. With the patient lying in a prone position, stand at one side of the table and grasp the hip of patient on further side in front. Apply pressure up and down the spine with the heel of the other hand, while pulling the hip upward. Treat both sides.

11. Patient in same position. Operator stands at head of the table. Apply considerable pressure on each side of the spine with the thumbs.

12. Raise the limbs in one arm and rotate them, while applying considerable pressure at the lower part of the abdomen with the other hand.

13. Apply pressure to lower part of spine while one limb is raised. Raise the other limb and repeat the pressure.



FIG. IV. ABDOMINAL PRESSURE.

TREATMENT OF NECK.

1. Apply deep pressure with the fingers on both sides of the spine, just at the base of the skull. Used in fevers and for headaches.



FIG. V. INHIBITION OF THE VASO-MOTOR.

2. Turn the head to either side as far as possible without inconveniencing the patient. Look for lesions.

3. Flex the head upon the chest.

4. Patient in reclining position. Rotate the head in one direction and the neck in the other. Reverse the movement.

5. Stretch the muscles of the neck by placing one hand under the chin and the other under the occiput and gradually pull the head toward you.



FIG. VI. STRETCHING THE SPINE.

TREATMENT OF BACK AND SPINE.

1. Patient should lie on the back. Raise the ribs. Grasp the elbow with one hand. Reach across the patient's body with the other hand and take hold of the muscles of the back. Stretch the arm at the same time. Manipulate the whole length of the spine with the free hand.



FIG. VII. RAISING RIBS AND RELAXING MUSCLES OF THE BACK.

2. Stand at side of table. Reach across patient's body, grasp the spinal edge of the scapula, and while bringing the arm of the patient across the chest, pull the scapula outwardly.



FIG. VIII. PULLING SCAPULA OUTWARD.

3. Same position. Reach over and grasp the arm of the patient on the other side. Take hold of the rib at or near the angle with the free hand, and while pushing it into place, lift up the outstretched arm and rotate it backward. Advise the patient to inspire deeply when the ribs are lifted.

4. Flex the knees on the thighs, and the thighs forcibly on the abdomen. This movement is used to relax the ligaments and muscles of the lumbar and sacro-iliac regions.

5. Patient sitting. Stand behind the patient and place the right hand on top of his head. Rotate the head so as to bring the neck against the thumb of the left hand. Move the left thumb successively along the arches of the vertebrae, while rotating the head.

6. Patient and operator in same positions. Bend the neck of the patient as far forward as possible on the chest. This stretches the neck muscles.



FIG. IX. ROTATION OF THE HEAD AND STIMULATION OF CERVICAL GANGLION.

7. Have patient lie on back, and stand at his side. Place one hand on the forehead and the other beyond to the other side of the neck. Rotate the head from side to side with the hand that rests on the forehead, alternately relaxing and stretching the muscles at the side and back of neck, while the hand placed on the neck pulls and stretches the muscles outward with each movement of the neck. Move the hand on the neck from one position to another as the tissues relax beneath it. The hand may be brought down as far as the shoulder. Apply the same treatment to all tissues in front of the neck down to the clavicles.

8. Loosen the muscular tissues in the upper part of the back by placing the tips of the fingers on the shoulder and manipulating with the thumbs. Relax all the tissues on the shoulders from the neck over the top of the shoulders.

9. Place one hand on top of the head and make fixed points along the spine with the thumb of the other hand, at the same time using the head and neck as a lever. Treat the other side of the spine in the same manner.



FIG. X. MANIPULATION OF HEAD AND NECK.

10. Have patient sit on a stool with his hands placed behind his neck. Place your hands under the patient's arms and take hold of his wrists. Place one side of the knee at the patient's spine and lift him upward and backward against the knee. This movement stretches the spinal, scapular and neck muscles and raises the lower ribs.

11. Patient in sitting position. Stand in front of the patient and place a pillow between. Clasp the spine of the patient with both hands and make deep pressure, pushing the vertebrae well in; then by rotating the body, pressure may be made to the side wished. This is a good movement to use in correcting lateral curvature.

12. Same position as No. 11. Grasp the spine firmly on each side, lift the patient and stretch the spine.

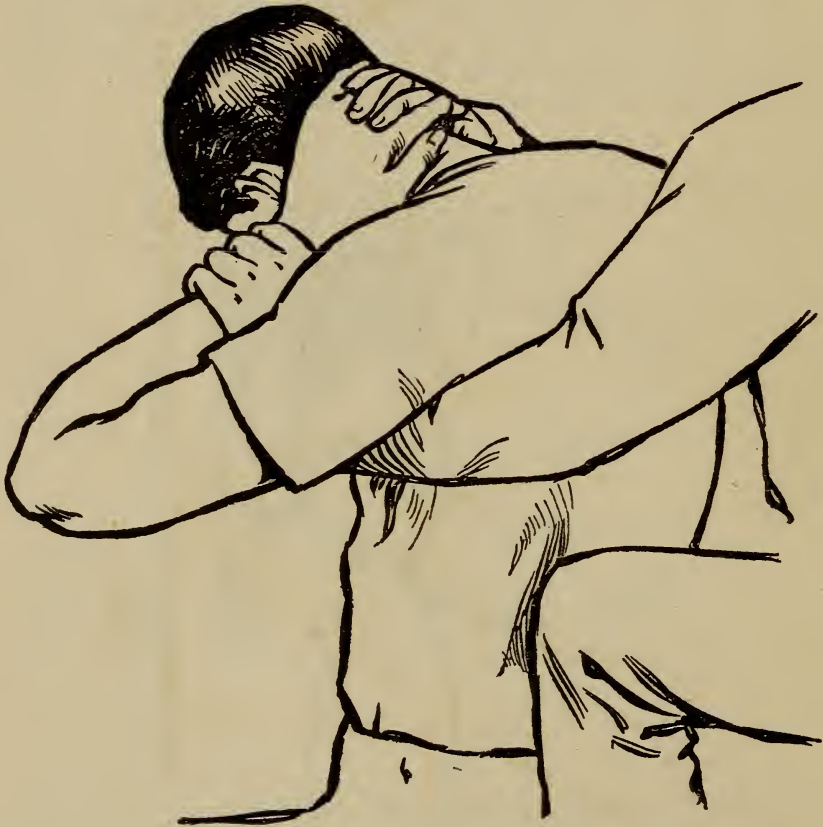


FIG. XI. STRETCHING OF SPINAL, SCAPULAR AND NECK MUSCLES.

TREATMENT OF THE ABDOMEN.

1. Place the patient on back with knees flexed. Relax the abdominal muscles with the palm of the hand. Begin low down on one side, work up on that side and repeat the movement on the other side. Spring the ribs. Move the abdominal contents from one side to the other between the palms of the hands.



FIG. XII. ABDOMINAL MASSAGE.

2. Apply direct pressure to the abdomen with the flat of the hand over the center of the abdomen below the umbilicus. Use side pressure to force the contents of the small intestines toward the cecum.

3. Lift the intestines. Flex the knees several times, in the meantime holding the abdominal contents for a minute or two.

4. Stimulation of Solar Plexus. Apply deep, steady pressure with a slightly circular motion just below the sternum, backward and upward.

5. Stimulate the liver, spleen, stomach and other abdominal organs by placing one hand on either side of the ribs and applying pressure, alternated with a few seconds of rest.

6. Alternate pressure and relaxation directly over the liver for the purpose of toning up this organ, as well as the adjacent abdominal viscera.

FIG. XIII. STIMULATION OF SOLAR PLEXUS.



TREATMENT OF LOWER LIMBS.

1. Take the limb in both hands and with a rotary movement of the hands move and relax all tissues to the bone.

2. Internal and external rotation and circumduction of limb. Flex calf of leg on thigh, and thigh on abdomen. Straighten limb out with proper rotation, with more or less force.

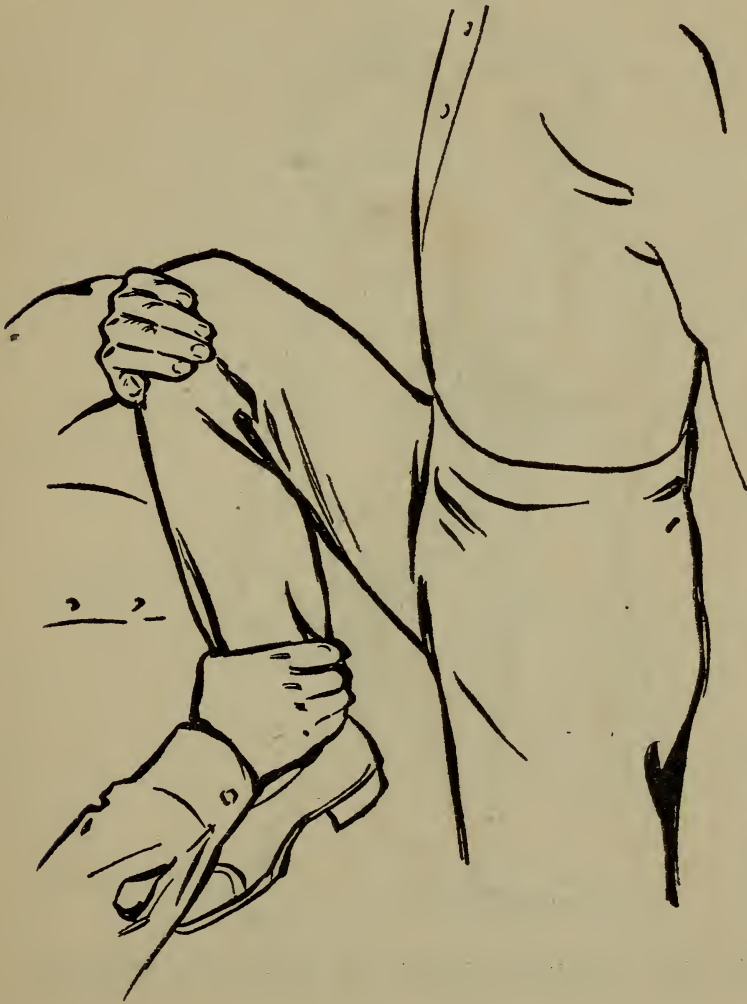


FIG. XIV. ROTATION AND CIRCUMDUCTION OF
LEG AND THIGH.

3. Stretch the sciatic nerve by extending limb, at the same time bearing down considerably on the foot.

4. Slightly flex the knee, work deeply into the muscles on the under side with both hands, stretching them outward at the same time.

5. Turn the foot outward as far as possible and allow it to come back to its normal position. Repeat the movement inwardly. Perform each movement about ten times.

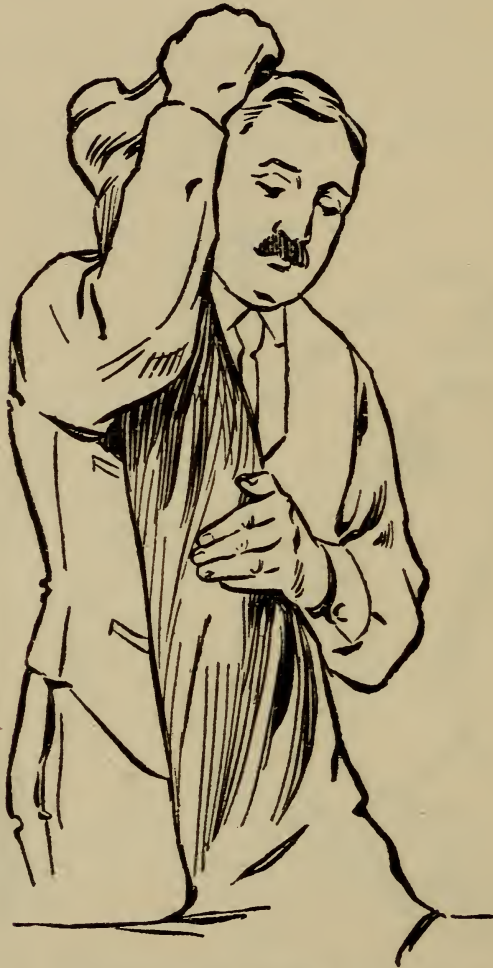


FIG. XV. STRETCHING OF SCIATIC NERVE.

APHASIA.

Definition—A loss of power of comprehending, speaking or writing words, due to cerebral lesions.

Symptoms—Patient comprehends, but is unable to express himself in words. Entire loss of voice is not common. Patients suffering from this disease have a strong tendency toward using profanity.

Treatment—Give general treatment, beginning at the upper cervix, and include every part of the body. Stretch the spinal cord in the following manner: Place one hand at the occiput and the other under the chin. Pull gently until feet move, rotating head while extension is made, and as the head is being turned press the fingers of the hand under the neck strongly against the sides of the vertebrae, just back of the mastoid process. Change hands and repeat the movement.

Prognosis depends upon the cause. Should be guarded.

HEADACHE.

Definition—Pain in the head.

Causes—Headache is always a symptom, never a disease in itself. It may be due to derangements of the stomach and liver, toxemic conditions, congestion and anemia of the brain, eye-strain, organic diseases of the brain, functional disorders and reflex causes.

Symptoms—The most prominent symptom is pain. The character and location varies according to the disease it is dependent upon. It may be superficial or deep, dull or heavy, throbbing or stabbing, general or local, and constant or paroxysmal.

- Treatment**—1. Reduce the heart action by freeing the ribs on left side and holding the inferior cervical ganglia.
2. Raise the clavicles.
 3. Stretch the neck, manipulate the neck muscles and stimulate the spinal accessory nerve.
 4. Treat the chest, liver, stomach and bowels.
 5. To relieve nausea, elevate and separate the third, fourth and fifth ribs on the right side.

Acute headache can be relieved in this manner: The patient may assume either of the following positions, sitting, standing or lying down. Place the fingers of both hands on both sides of the cervical spines, the upper portion close to the occiput and covering the vaso-motor area, and the thumbs on the side of the neck, covering the pneumogastric nerve. Press gently on the neck with the fingers and at the same time press on the nerves mentioned.

CHOREA.

Definition—St. Vitus' Dance. Involuntary spasmodic muscular twitchings of a neurotic origin.

Causes—This is usually a disease of childhood. Heredity seems to underlie some cases. It may be due to reflex conditions, dentition, fright and worms. It may follow rheumatism.

Symptoms—An attack usually comes on gradually with spasmodic twitching of the muscles of the

hands or face. This increases in intensity until all control of the muscles of expression are lost. The eyelids close spasmodically and the facial muscles jerk. Speech is often indistinct and mumbling. Swallowing is sometimes difficult. The hands are in constant motion, and objects on being taken up by the hands are dropped. The gait is stumbling. Usually only one side is affected, later both. The child is peevish and fretful and is subject to sleeplessness and unpleasant dreams. The appetite is poor, patient constipated and anemic, and there is a gradual loss of weight.

An attack usually lasts from six to twelve weeks. Usually one attack occurs, but it may recur annually.

Treatment—Examine for the cause and remove it.

1. Give a thorough treatment to the spine.
2. Extend the spine by proper manipulation.
3. Relax the muscles in the cervical and upper dorsal regions.
4. Thoroughly massage the affected muscles.
5. Give a general treatment.

Each case must be treated individually. No hard and fast rules can be laid down for the correction of this trouble. Treat all symptoms as they arise. Patient should be treated at least three times weekly.

EPILEPSY.

Definition—Grand Mal or Epilepsy is a disease of the nervous system characterized by sudden loss of consciousness and often accompanied by convulsions.

Causes—Nervous heredity seems to play an important part in this disease. The abuse of alcohol by parents seems to have a decided effect on their offspring. The majority of cases occur in early life, generally before the age of twenty. The exciting causes are: Injuries to the head, syphilis, over-indulgence in alcoholics, shock, sexual excesses, phimosi, sun-stroke, acute infectious diseases, dentition and worms. Auto-intoxication from putrefaction in the bowels may give rise to this disease.

Symptoms—An attack may come on suddenly, but is usually preceded by a peculiar sensation resembling a sound like a rising current of air. The patient may suffer from melancholia, vertigo, dizziness, gastric distress or headache, flashes of light, disturbances of sound, taste or sense of feeling. There is usually coldness and numbness of the hands, which gradually passes upward and terminates in paroxysms. The attack may come on without warning, the patient utters a sharp cry and falls to the ground. He first passes into a tonic spasm, during which the lower extremities are rigidly extended and the upper extremities flexed. The arms are bent at the elbows, the hands upon the wrists and the fingers tightly closed upon the palms. The head is retracted or drawn to one side. The patient becomes cyanotic, the face livid and swollen.

This stage is followed by relaxation. All the muscles of the body are affected. The jaws are tightly closed and the tongue often bitten. A frothy saliva often tinged with blood issues from between the teeth. After a few minutes the spasm gradually subsides and the patient passes into a condition of coma with stertorous breathing, and then into a deep sleep, usually lasting from two to three hours.

These attacks recur regularly at long or short intervals.

- Treatment**—1. Give thorough manipulation to the neck so as to relax the muscles in this region.
2. Thoroughly relax the muscles of the spine and give a general treatment to the spine itself.
 3. If the sphincter is contracted, relax same by dilatation.
 4. Give a general treatment to improve the general circulation.
 5. Correct the reflexes.
 6. Apply pressure at the base of the skull, the sub-occipital fossae and to the solar plexus.
 7. Thoroughly manipulate the abdomen.
 8. Raise the clavicles and depress the first rib.
 9. Treat the cervical sympathetic nerves.

This treatment should be given during the intervals and at least three times a week.

The diet should consist of light, nutritious food.

NEURALGIA.

Definition—A severe pain of paroxysmal character distributed along the course of a nerve. It is usually functional.

Causes—Predisposing causes are age, sex, heredity and anemia. It occurs mostly during middle life and is rare in children and old people. It is usually the result of an inflammatory or circulatory disturbance in the nerve trunk. Exposure to cold and injuries are exciting causes. Certain diseases such as debility, improper hygiene, overwork and various excesses sometimes give rise to this disorder. Decayed teeth are causative factors.

Symptoms—Pain is the most prominent symptom. It usually occurs in paroxysms, runs along the course of the nerve and is of a darting or burning character. Tender points are found along the course of the nerve, on pressure.

Treatment—For facial Neuralgia, apply a hot water bag to the back of the neck and upper dorsal region, and also the following measures:

1. Reduce any vertebral dislocation, if present.
2. Treat the terminal branches of the fifth nerve.
3. Relax the muscles and nerves of the neck and back.
4. Give a thorough abdominal treatment.

For intercostal Neuralgia, raise the rib or set the vertebrae causing the trouble. Also treat the other indications by proper measures.

NEURITIS—SIMPLE.

Definition—This is an inflammation of the nerve-trunks, characterized by pain and paralysis of the parts supplied by the affected nerve-trunk.

Causes—The most common causes are compression and wounds or injuries of the nerves. Cold and damp are exciting causes, and it may also follow syphilis and lead-poisoning.

Symptoms—The most prominent symptom is sharp, shooting pains of a burning, tingling or tearing character along the course of the affected nerve-trunk and the area of its distribution. The attack may be accompanied by febrile reaction and may destroy the nerve-trunk, causing wasting and destruction of the muscular tissue. There is impairment of muscular strength, spasmodic contractions and muscular cramps. In advanced cases the muscles lose their power of contraction when subjected to the electric current. Herpetic eruptions may appear on the skin. The hair may turn white and fall out and the nails become brittle.

- Treatment**—1. Put the patient to bed and advise perfect rest.
2. Apply hot applications.
 3. Gently massage the structures surrounding the nerve affected.
 4. Remove pressure everywhere.
 5. Remove cranial congestion by freeing the pressure on the neck veins, by relaxing the muscles.

NEURITIS—MULTIPLE.

Definition—A simultaneous or rapid, successive inflammation of a number of symmetric nerves, characterized by pain, numbness, loss of power, muscular atrophy and mental disturbances.

Causes—The most common causes of this disease are alcoholism, lead, arsenical or silver poisoning, syphilis and malaria. It may follow diphtheria, rheumatism and typhoid fever. It is supposed to be caused by a specific poison in the blood which has a particular influence on the nerve-fibres.

Symptoms—The onset may be slow or rapid, depending upon the cause. If due to acute infections, the symptoms come on suddenly with a chill, high fever, backache, muscular pains, headache and a feeling of malaise. There is gastric disturbance, the patient is constipated, the tongue is coated and anorexia is present. When due to chronic intoxications, the symptoms are not marked, and fever may be entirely absent. There is loss of muscular power and this gives rise to the characteristic symptom of "wrist-drop" and "foot-drop." The sensory symptoms complained of are pain, tenderness, tingling, numbness and loss of cutaneous sensibility. As the disease progresses, muscular inco-ordination and atrophy take place. The knee-jerk is feeble or entirely absent. In alcoholic cases, delirium, mania and delusions often occur. These are associated with muscular tremors. The skin is glossy and sometimes edematous and the hair and nails undergo changes.

Treatment—Same as for simple Neuritis.

NEURASTHENIA.

Definition—A condition of nervous irritability caused by exhaustion of the nerve centers.

Causes—This is a disease of middle adult life, and infrequent in children or old age. It affects both sexes about equally. High altitude and climatic extremes favor its development. Heredity is often an underlying cause, and also race, the Scandinavians, Slavs and Hebrews being particularly subject to it. All debilitating conditions may bring on the disease. Among the exciting causes, anxiety, worry, grief, disappointment, sexual excesses, loss of sleep, fright or shock, frequent pregnancies, drug habits and the menopause, are most common.

Symptoms—The most prominent and constant symptom is great fatigue, following slight exertion. This is associated with a variety of other symptoms, mental, gastro-intestinal, and circulatory, involving practically every organ and part of the body. The patient suffers from headache, backache, insomnia, cerebral and mental irritability. The patient cannot read for any length of time without causing eye-strain. The appetite is variable and gaseous eructation and rumbling in the bowels are often complained of. This may cause gastric distension and cardiac palpitation. The pulse is usually rapid and may range from 100 to 140. The amount of urine secreted is lessened and of high specific gravity. Some patients are subject to fears and lack of self-confidence. Loss of weight is common to this condition on account of defective nutrition, but sometimes the patient may have a certain

amount of fatness. Sexual power is lessened, and in some cases impotence may actually exist. As the disease progresses, loss of memory is complained of and the patient cannot concentrate his mind on one subject. This is apparent, however, rather than real.

- Treatment**—1. Give a general treatment.
2. Manipulate the neck and head.
3. Relax the muscles of the spine in upper dorsal and cervical regions.
4. Vibrate the spine.
5. Gently stretch the spinal cord.
6. Stimulate the liver and the glands.
7. Correct the cause.

Treat the patient two or three times weekly.

INFANTILE PARALYSIS—ACUTE ANTERIOR POLIOMYELITIS.

Definition—A childhood disease characterized by sudden paralysis of one or more limbs or of individual muscle-groups and followed by rapid wasting of the affected parts and consequent degeneration and deformity.

Causes—This disease is most prevalent during the first three years of childhood and is rare after the fifth year. It appears most frequently during the hot summer months, but it may occur at any time. The exact cause is unknown, but it is believed to be due to an infection.

Symptoms—The onset is usually sudden and is followed by fever, vomiting, convulsions and sometimes coma or loss of consciousness. The fever va-

ries from 102 deg. to 104 deg. F., but in some cases fever may be absent. There are pains in the back and in the muscles of the extremities. When the acute symptoms subside, the paralysis comes on and is quite rapid. The paralysis most frequently involves only one extremity, but sometimes all four may be affected at the same time. At the end of one or two weeks the acute paralytic attack diminishes for several weeks and some improvement takes place. Atrophy, however, soon follows and the paralyzed muscles begin to shrink, and the affected limb becomes smaller and shorter. The most frequent deformities resulting from the paralysis are talipes vagus and varus.

Treatment—1. Give a general treatment.

2. Thoroughly manipulate and extend the spine.
3. Look for any lesions in the cervical or lumbar regions and correct same.
4. Treat as you would for general paralysis.

Prognosis—Favorable in some cases and many others can be benefited.

OCCUPATION NEUROSIIS.

Varieties—Writers' cramp, telegraphers' cramp, violin or piano players' cramp, etc.

Definition—This is an affection in which any attempt to use the fingers at once produces a spasm of the muscles of those fingers that are brought into play.

Causes—The exact cause is unknown. Heredity

is supposed to underlie some cases. The overuse of the fingers in one particular line of work is responsible in many instances.

Symptoms—Usually develop gradually. There is a feeling of stiffness in the used member and the part feels tired and heavy. Spasmodic contractions occur. Pain is usually limited to the affected part, or it may be more extensive and may be spontaneous or induced by using the fingers. Prickling sensations and numbness are often present in the crippled member.

- Treatment**—
1. Thoroughly relax all the muscles of the neck, the cervical ganglia and the muscles of the dorsal region.
 2. Manipulate the structures lying along the course of the affected nerve.
 3. Apply vibratory treatment to the muscular system over the upper chest, shoulders, neck and back.
 4. Raise the clavicles, arms and ribs.
 5. Stretch the elbow and shoulder joints.
 6. Remove the lesion in every case.
 7. Free the circulation.
- Advise rest.

Prognosis—Usually unfavorable.

PROGRESSIVE MUSCULAR ATROPHY.

Definition—Wasting palsy. A slowly progressive wasting and atrophy of certain groups of muscles.

Causes—Most common in males between twenty-five and fifty years of age. A predisposing cause is the constant use of one set of muscles. Injuries to the spinal column, exposure to cold and wet, syphilis and lead-poisoning are other causes. It may follow such acute diseases as measles, acute rheumatism, diphtheria and typhoid fever.

Symptoms—These usually come on gradually. The hand is usually the first affected and gradually begins to waste away. The fibres become contracted, power is lost, there are disorders of sensation and the surface is cool. There is also pallor of the skin. All the muscles of the body may be affected except those of mastication and those that move the eyeball.

Treatment—1. Rotate the head.

2. Thoroughly manipulate the muscles of the neck.
3. Raise the clavicles, chest and arms.
4. Relax the intercostals.
5. Apply pressure and vibration to the sides of the spine, from above downward, in the dorsal and lumbar regions.
6. Flex and extend the limbs.
7. Raise the limbs upward or backward.
8. Free the circulation.
9. Thoroughly manipulate the Brachial plexus or region.

Treatment every third day.

Prognosis—Unfavorable, but the progress of the disease can be arrested by proper treatment.

FACIAL PARALYSIS—BELL'S PALSY.

Definition—Paralysis of the face. Nearly always unilateral.

Causes—Impairment or destruction of the function of the seventh or facial nerve by various diseased conditions.

Symptoms—Paralysis usually occurs suddenly. On examination one side of the face is found to be paralyzed and the unaffected muscles drawn toward the sound side. Expression is lost and the natural wrinkles and lines are obliterated on the affected side. The corner of the mouth is dropped and saliva dribbles from it. The eyelid on the affected side cannot be closed and the eye waters. Swallowing is seriously interfered with and the tongue is directed toward the paralyzed side. The forehead cannot be wrinkled.

- Treatment**—
1. Relax all the muscles of the neck and give freedom to the venous return blood.
 2. Extend the neck and give gentle, firm and steady rotation.
 3. Thoroughly manipulate the muscles high up under the angles of the lower jaw. Pull these muscles in different directions.
 4. Manipulate the parotid, submaxillary and sublingual glands.

Give a treatment every other day.

PARALYSIS AGITANS.

Definition—This is a chronic disease of the nervous system, characterized by tremor or alternate contraction and relaxation of the muscles of the part involved.

Causes—Usually occurs after middle life and is more common in males than females. Heredity is supposed to have some influence. Exciting causes are: injuries, mental strain, anxiety, fright, exposure to cold and wet, and some diseases, such as malaria and rheumatism.

Symptoms—These usually come on gradually and affect the left hand first. Tremor is the first symptom noticed, and as the disease progresses it involves the left foot, then the right hand and right foot. The tremor is continuous except during sleep. It is increased by excitement and diminished during physical work. The muscles become weak, there is hesitancy in motion and finally rigidity or spasm occurs. The gait is characteristic of this disease. The trunk is bent in walking, and in order to maintain equilibrium he walks faster and faster, until he either falls or grasps something for support. The face becomes fixed and expressionless, saliva dribbles from the mouth, the voice is slow and sometimes stuttering and the knee-jerk may be exaggerated. Flushing and heat are sometimes complained of. The mind is seldom affected. The index finger moves against the trembling thumb, giving the appearance or the movement used in rolling pills.

- Treatment**—1. Give a general treatment.
2. Thoroughly manipulate the neck, spine, ribs and clavicles.
3. Remove all lesions.
4. Relax the spinal tissues.
5. Give special attention to kidneys, liver and bowels by proper measures.
6. Treat the whole length of the spine and free the circulation.

Prognosis—Unfavorable. The disease may last from twenty to thirty years.

PARALYSIS—GENERAL.

Treatment—In the treatment of paralysis it is first necessary to determine the cause and correct any lesions present.

1. Begin by giving a general treatment.
2. Relax the spine and give a soothing treatment. Avoid unnecessary force.
3. Thoroughly manipulate each joint.
4. Pay particular attention to the various organs, such as the stomach, intestines, liver and kidneys.
5. Manipulate the muscles of the neck so as to cause relaxation.
6. Raise the clavicles.
7. Take off pressure everywhere. Look for lesions in the spine, ribs, hips, innominates and coccyx.
8. Conclude the treatment by giving a general treatment to the spine.

LOCOMOTOR ATAXIA.

Definition—A chronic degeneration of the posterior columns of the spinal cord and posterior nerve roots giving rise to muscular inco-ordination, sharp, shooting or neuralgic pains in the limbs, loss of sensation and the reflexes.

Causes—The exact cause is unknown. It may follow alcoholic excess, exposure to cold, injury or inflammation of the cord, and is often hereditary. There is sometimes a history of syphilis and it has been known to follow pernicious anemia.

Symptoms—The first symptoms complained of are sharp, piercing or lightning-like pains in the lower extremities, enfeebled or lost knee reflex or jerk, disordered gait and disturbances of vision. The Argyle-Robertson pupil is present. This is a condition where the pupil does not contract to light, but does contract during accommodation. Romberg's symptom is also present. The patient is unable to walk along a straight line, and when the eyes are closed is unable to take a step, or to stand erect with his feet in juxtaposition without swaying or losing his balance. Retention of urine and sluggish action of the bladder are not infrequent, while constipation is common. There is loss of sexual power and often desire. At times violent paroxysms of pain may occur in the epigastric region, accompanied by vomiting, but these spasms of pain may occur in any of the organs of the body.

- Treatment**—1. Give a general spinal treatment.
2. Thoroughly relax the spine by extension.

3. Reduce any dislocations.
4. Separate the ribs.
5. Apply rotation and steady pressure to the sciatic nerve about midway between the great trochanter and the ischial tuberosity.
6. Thoroughly manipulate the abdomen.
7. Tone up the solar plexus.
8. Manipulate the lower limbs.

ANEMIA.

Definition—Anemia is a condition of the blood in which there is a deficiency in its quantity or quality; in most cases the number of red blood-corpuscles is diminished.

Causes—Predisposing causes are pregnancy, menopause and heredity. Females are most subject to it. Among exciting causes may be mentioned deficient food, air or sunshine, overwork, mental worry or shock, chronic intestinal catarrh, cancer, Bright's disease and excessive nursing.

Symptoms—The principal symptom is unnatural pallor of the skin and mucous membranes. There is loss of strength, lassitude, nervousness, palpitation, shortness of breath, headache, cold extremities and menstrual disorders. Constipation is usually present. Systolic murmurs over the aorta, pulmonary and carotid arteries are frequently heard.

- Treatment**—
1. Begin with a general treatment.
 2. Stretch the neck in the following manner: Patient on back. Place one hand under the chin and the

other at the occiput. Pull gently until the patient's feet move; then turn face about one-eighth way around and back to a straight line with the body and let go. Change hands and repeat the movement.

3. Thoroughly vibrate the abdomen, liver, spleen and kidneys.
4. Apply friction along the spine, particularly at the eighth and ninth dorsal vertebrae.
5. Raise the clavicles and ribs.
6. Stimulate the vaso-motor centers.

Advise patient to take plenty of outdoor exercise, cold baths and deep inhalations.

The diet should consist of easily digestible and nourishing foods. May take plenty of milk between meals and at bedtime, eggs, rare meats and ice cream. Must not take pickles, vinegar, gravies and rich, spicy foods.

Prognosis—Favorable if treated early.

ARTERIO-SCLEROSIS.

Definition—A hardening of the arteries, due to an overgrowth of the connective tissue in the vessel and calcareous deposits.

Causes—Old age, rheumatism, syphilis, malaria, lead-poisoning, alcoholism and diabetes. Predisposing causes are: heredity and chronic nephritis. This condition is more common in males than females.

Symptoms—They are obscure. In many cases the pulse is hard and bounding, breathing is diffi-

cult and insomnia is present. There may be cardiac hypertrophy. Some patients may be troubled with attacks of dizziness, attacks resembling apoplexy or loss of consciousness.

- Treatment**—1. Give a general Osteopathic treatment.
2. Apply stimulation between the second and fifth dorsal vertebrae, and loosen the muscles with the finger tips.
 3. Equalize the circulation of the blood throughout the body.
 4. Raise the ribs.
 5. Apply vibration and pressure to the liver.
 6. Thoroughly manipulate the abdomen.
 7. Stimulate the solar plexus by applying deep, steady pressure, with a slightly circular motion, just below the sternum. The pressure should be directed backward and upward.

APOPLEXY.

Definition—Paralysis from a rupture of a cerebral vessel and consequent hemorrhage into the substance of the brain or pia mater. Usually occurs after middle life and is rare before the age of forty.

Causes—Diseases of the blood vessels associated with chronic enlargement of the heart, heredity, Bright's disease, syphilis, excessive use of liquor,

indiscretions in diet, gout, and excesses of all kinds, causing a lowering of vitality.

Symptoms—Premonitory: Headache, dizziness, disturbance of vision, tinnitus aurium, or ringing in the ears, insomnia, tremor, epistaxis, thickness of speech, loss of memory, and a sensation of tingling and numbness in the affected side.

The attack usually comes on suddenly. There is localized headache, vomiting, yawning and sighing, increasing mental stupor and finally complete coma. Breathing is slow, deep, loud and stertorous. At first the pulse is full and slow, often irregular; later it may become more frequent. The face is flushed and swollen and the lips puffed out and blue. Sometimes the face is pale. At first the temperature is subnormal and higher on the side paralyzed. The eyes are injected and the pupils contracted or dilated. Unequal pupils are always a grave symptom. Paralysis usually occurs on the side opposite the cerebral lesion.

- Treatment**—1. Relax all the muscles in the cervical region.
2. Give light manipulation to the muscles of the back on both sides of the spine.
 3. Reduce dislocation of atlas or axis, if dislocation is present.
 4. Raise the clavicle and first rib.
 5. Manipulate the affected nerves and muscles.
 6. Keep the bowels open and kidneys active by proper movements.

7. Apply ice bags to head and neck, and heat to feet.

Keep the head high.

The diet should be mostly liquid.

Treat daily at first, then three times per week.

EPISTAXIS.

Definition—Nosebleed.

Causes—Alteration in the character of the blood, weakness of the vascular walls and increased blood pressure. Nosebleed usually occurs in the following diseases: Typhoid fever, diphtheria, scurvy, anemia, and chronic diseases of the heart, lungs, kidneys and liver. It is common at the age of puberty, and often replaces menstruation. Other causes are cerebral congestion, picking of the nose, ulceration and polypi.

Symptoms—If due to cerebral congestion, it is usually preceded by headache, ringing in the ears, throbbing of the temples and flushing of the face. The symptoms are soon relieved by the loss of blood.

Many times nosebleed comes on suddenly; the blood trickles from the nose drop by drop, or it may flow rapidly. In "bleeders" the tendency to nosebleed is a dangerous one. It is usually checked with great difficulty, and when much blood is lost it produces anemia, faintness and dizziness.

Treatment—1. Stimulate the superior cervical ganglion.

2. Apply steady pressure at the inner canthus of the eye.

3. Relax the muscles over the jugulars.
4. Raise the arms over the head.
5. Compress the facial artery at the angle of the inferior maxillary bone.
6. If the above measures fail to check the hemorrhage, it will be necessary to plug the nares.

PALPITATION OF THE HEART.

Definition—A too rapid action of the heart, either regular or irregular, of inorganic origin.

Causes—It is more common in women and occurs most frequently at puberty and at the menopause. In men it is more frequent at or after middle life. Mental excitement, grief or fright, diseases of the uterus, excessive use of alcohol, tobacco, tea and coffee are all conducive to this condition. It is often caused by gastric disturbances and is a symptom of anemia.

Symptoms—The chief symptom is the unusual action or beating of the heart. The attack may occur suddenly, in which case the face grows pale. It may be mild or severe and last from a few minutes to days. The pulse is rapid, sometimes reaching 160 beats per minute. There is a feeling of weakness in the epigastric region and sometimes nausea. The cardiac impulse is diffuse and sometimes heaving.

Treatment—1. Raise the left arm steadily and strongly high above the head.

2. Raise the clavicles and at the same time press the knee between the scapulae while the arms are drawn upward and backward one or two times.
3. Press upon the inferior cervical ganglion.
4. Raise the ribs and press upon the solar plexus.
5. Pressure on the pneumogastric or in the ovarian region will often quickly arrest the trouble.

Prognosis—This condition seldom causes death unless prolonged.

VALVULAR DISEASE OF THE HEART.

Cause—Disease of the valves of the heart usually follows acute attacks of endocarditis. About one-half of all cases result from rheumatism or a rheumatic diathesis. It may be caused by systemic poisoning from malaria, chronic rheumatism and syphilis or chemical irritants. Long muscular strain may give rise to this disease, particularly of the aortic valve. Malformation of the valves and heredity are predisposing causes. More than one-half of all cases occur under the age of thirty.

Sypmtoms—The symptoms vary little in all forms of valvular diseases. If marked hypertrophy is present, exercise, mental strain or excitement may bring on throbbing headache, dizziness and ringing in the ears. Dull headache, flashes of light before the eyes and pallor of the face are early symptoms of aortic incompetency. At other times dyspnoea may

be present. Hot flashes and sweats sometimes occur. The patient feels faint on arising suddenly and the heart palpitates. Pain may or may not be present. The pain may be dull or sharp and extend to the shoulders and down the arms, particularly the left one. Cough is sometimes present. The patient is subject to dreams, is peevish and irritable.

Differential Diagnosis—In aortic incompetency the apex beat is directed downward and outward; the diastolic murmur is transmitted down the left side of the sternum.

In aortic stenosis the apex beat is not so far displaced, while the systolic murmur in the aortic area is transmitted to the carotids.

In mitral incompetency the apex beat is rarely directed below the sixth interspace. It may, however, extend to the anterior axillary line. The systolic murmur at the apex is transmitted to the axilla and is often heard in the back at the angle of the scapula.

The impulse is not marked in mitral stenosis. The presystolic murmur heard at the apex is loud and rough in character.

Tricuspid incompetency gives rise to pulsation in the epigastrium and jugular veins. The systolic murmur at the lower end of the sternum is transmitted to the right or left.

In tricuspid stenosis there is a weak pulsation in the jugulars and a presystolic murmur is heard at the lower right border of the sternum.

Pulmonary incompetency causes pulsation in the jugulars and the diastolic murmur is transmitted down the sternum.

In pulmonary stenosis the veins are dilated and the systolic murmur is transmitted toward the left shoulder. The second pulmonic sound is weak.

- General Treatment**—1. Apply the treatment carefully and not too long or too severely.
2. Equalize the circulation.
 3. Give a general treatment.
 4. Relax the muscles in the cervical and dorsal regions.
 5. Raise the ribs and separate those on the left side.
 6. Raise the clavicles.
 7. Manipulate the sympathetic ganglia in the neck.
 8. Relax the muscles over the region of the heart.

Treatment may be varied according to condition. The aim should be to correct the lesion and take off pressure everywhere.

DROPSY.

Definition—An accumulation of serous fluid in the connective tissue spaces and serous cavities of the body, causing abdominal distension and displacement of the viscera.

Causes—The principal cause is obstruction of the portal system. It often follows cirrhosis of the liver, diseases of the lungs and heart, or pressure to the venous circulation from tumors or cancer.

Symptoms—Abdominal distension and constipa-

tion are most prominent. The amount of urine secreted is small and respiration is greatly interfered with. By holding one hand on one side of the abdomen and tapping lightly with the fingers on the other side of it, a wave-like impression is usually elicited. The umbilicus is forced outward.

- Treatment**—
1. Remove all undue pressure on the heart and lungs.
 2. Stimulate the vaso-motor area.
 3. Raise the arms and clavicles.
 4. Stimulate the spine from the cervical to the sacral.
 5. Apply vibration to the abdomen.
 6. Knead the bowels, liver and spleen.
 7. Stimulate the renal splanchnics and lumbar area.
 8. Apply stimulation to the kidneys by proper treatment.
 9. Give a general treatment to tone up all the tissues of the body.

CATARRHAL JAUNDICE.

Definition—Catarrh of the bile ducts or an inflammatory condition of the mucous membrane lining these ducts and duodenum.

Causes—Overloading the stomach with food or drink, pressure from any cause and a deficiency of normal secretion.

Symptoms—There is a feeling of distress in the epigastrium, accompanied with more or less pain, nausea, anorexia, coated tongue, diarrhoea and col-

icky pains, the stools assuming a clay color, urine dark colored and loaded with constituents of the bile, the eyes are yellow and the skin also assumes a yellow cast. Slight fever may be present. The liver is sore to the touch. Mental depression often accompanies this disease.

- Treatment**—
1. Stimulate the vaso-motor area and pneumogastric nerve.
 2. Manipulate the muscles of the neck.
 3. Raise the clavicles and chest muscles.
 4. Stimulate the dorsal region and relax the muscles.
 5. Have the patient lie on the left side or back and vibrate the abdomen and liver.
 6. Knead the liver and bowels.
 7. Press upward beneath the seventh and tenth cartilages on the right side.
 8. Give the colon a thorough treatment.
 9. Manipulate the lower limbs.

Have patient drink plenty of water and eat only light, nourishing and easily digestible foods.

CHRONIC GASTRIC CATARRH.

Definition—A chronic catarrhal inflammation of the mucous membrane of the stomach.

Causes—Usually follows repeated attacks of acute gastritis, and results from a disturbance in the peptic glands.

Symptoms—The prominent symptoms usually complained of are distention after eating, tenderness, an uneasy gnawing sensation and burning pain in the stomach (“Heartburn”), cough, eructation of gas, nausea, and a feeling of oppression. Very often the gaseous distention may cause cardiac palpitation and dizziness. The tongue is heavily coated, the breath foul and there is a bad taste in the mouth. The patient is melancholy and ambitionless. The symptoms are so variable that no correct classification can be made, but given a case where the majority of the symptoms mentioned are present, you cannot make a mistake in diagnosis.

- Treatment**—
1. Relax all the muscles of the neck and correct any lesions present.
 2. Raise the clavicles.
 3. Stimulate the vagus nerve.
 4. Apply steady pressure to the spine along the dorsum and splanchnic region.
 5. Move the spinal muscles on both sides upward and outward, especially from the fifth to the tenth dorsal.
 6. Deeply knead the lower bowel and lift same.
 7. Spread the diaphragm.
 8. Raise the ribs.
 9. Stimulate the solar plexus.

Advise long, deep breathing four to six times daily. Pay particular attention to the diet. Articles of food causing the least amount of fermentation should be allowed.

VERTIGO.

Definition—Dizziness is a condition in which objects about a person seem to be moving rapidly to and fro or in a circle.

Causes—This condition is dependent upon many causes. It may be due to eye-strain or near-sightedness, gastric or nervous disorders, and as a result of interference with the cerebral circulation. Dizziness dependent upon gastric disorders is most common, such as constipation, derangement of the liver or stomachic and intestinal indigestion.

Symptoms—The most prominent symptom of all forms of this trouble is the sensation or consciousness of rapidly moving objects before the patient, or he may experience the feeling of moving around objects which remain stationary. An attack comes on suddenly. The vision becomes indistinct and the thoughts confused. The patient experiences a sense of sinking and may fall unless he grasps something for support. Nausea and vomiting and palpitation of the heart are quite frequent accompaniments.

Treatment—

1. Correct the cause. If due to eye-strain, remove the trouble by rest and properly fitting glasses.
2. Give a general treatment, particularly to the neck and spine.
3. Apply pressure beneath the clavicle to reach the fibres of the cardiac plexus.
4. Apply pressure on the occiput and atlas while the head is thrown well back.

5. Stroke the jugulars downward.
6. Raise the clavicles.
7. Correct any cervical lesions.

GASTRIC DILATATION.

Definition—An increase in the normal capacity of the stomach.

Causes—Pyloric obstructions (tumors, scar tissue, tight lacing and outside pressure), weakness of its muscular walls, gastric ulcers, overloading of stomach, and chronic gastric catarrh.

Symptoms—The tongue is usually coated, the breath foul and the appetite fitful. The appetite may be increased or entirely gone. The patient suffers greatly from thirst. Erucations of foul smelling gas and regurgitation of sour fluid are often present. Vomiting usually comes on when the disease is well advanced. There is usually great distress after eating, and palpitation of the heart is not infrequent. Constipation is marked and the quantity of urine reduced. The general health is affected and emaciation gradually takes place.

- Treatment**—
1. Advise against the use of fluids during meals.
 2. Equalize the nerve force by removing the pressure from the splanchnic and pneumogastric nerves.
 3. Stretch the abdominal muscles.
 4. Give a general abdominal treatment.

INTESTINAL COLIC.

Definition—An acute spasmodic pain in the intestines, characterized by paroxysms of griping, neuralgic, abdominal pain.

Causes—It occurs mostly in nervous, hysterical or anemic persons. The most direct causes are accumulations of indigestible food in the bowels, worms, poisonous drugs, diseases of the uterus, liver, kidneys or bladder, acting reflexly, autointoxication and exposure to cold.

Symptoms—An attack often comes on suddenly. There is usually localized paroxysmal pain around the umbilicus, and is of a sharp and tearing character. The limbs are usually flexed, and pressure on the abdomen gives relief. Flatulency is present and sometimes a large amount of gas is expelled from the stomach and bowels. Nausea and vomiting are not infrequent. Constipation is the rule, and the abdomen is tympanitic. The pulse is small and hard, the face pale, anxious and pinched. The patient is subject to cold sweats. Fever is usually absent, although a slight rise is not infrequent. Moreover, the temperature is often found to be subnormal.

Treatment—Grasp the patient's right arm and stretch it strongly up to the side of the head. At the same time press with the fingers of the other hand on the right side of the spinous processes from the fourth to the eighth dorsal vertebrae, the arm being let down quickly for a few times, as the fingers are lowered along the spine.

If any other condition is present give indicated treatment.

INTESTINAL INDIGESTION.

Definition—Inability of the intestinal fluids to digest food.

Causes—Imperfect diet, use of tobacco, diseases of the stomach, liver and pancreas, lack of exercise and nervous exhaustion.

Symptoms—The most prominent symptoms are pain, flatulency, rumblings in the bowels due to gas, loss of appetite, headache, diarrhoea alternated with constipation, colic and pain in the limbs. In the chronic form there is dizziness, insomnia, ringing in the ears, cardiac disturbance, anemia, high-colored urine and emaciation.

Treatment—1. Free all the muscles of the neck.

2. Raise the clavicles, shoulders and chest muscles by raising the arms. Treat the spine as far down as the twelfth dorsal with the fingers, while the arms are raised, pulling the muscles strongly upward and outward each time the arms are raised. Treat both sides.

3. Manipulate the liver, stomach and bowels slowly and deeply for fifteen or twenty minutes.

4. Relax the sphincter muscles.

5. Give a general treatment.

6. Flush the bowels with warm water every night.

7. Treat diarrhoea, if present.

Treat patient every other day.

SIMPLE DIARRHOEA.

Definition—An unusual frequency in evacuation of the bowels, characterized by liquidity of the feces.

Causes—Diarrhoea occurs most frequently in neurotic individuals as a result of fatigue, fear, excitement, and shock or nervous exhaustion. It may be brought on reflexly by gastric disturbances, teething and exposure to cold. Overloading of the stomach, fresh or unripe fruits and decomposing articles of food in the intestines frequently give rise to this disorder.

Symptoms—The most important symptom is the considerable increase in the number of bowel movements, more particularly in the morning soon after arising. The stools are usually fluid in character and free from blood, mucus or pus. The stools may contain partially digested food. In some cases no other symptoms are manifest, while in others there is dizziness, palpitation of the heart, a feeling of oppression, and flashes of heat and cold. Sometimes the abdomen is distended with gas, the tongue is coated and headache is present.

Treatment—1. Extend the spine by placing the knee in the patient's back in the first and second lumbar areas and bending the body back against the

knee and holding it in that manner for a few seconds.

2. Place the patient on abdomen and apply steady pressure on either side of the spine from the middle dorsal region to the coccyx for about ten minutes.
3. Extend the legs backward while the hand is placed in the lumbar region of the spine.
4. Completely relax all the tissues of the spine and back.
5. Give other treatment to meet indications.

CONSTIPATION.

Definition—An infrequent or difficult evacuation of the feces.

Causes—Persons of a bilious or nervous temperament are mostly subject to this condition. Sedentary habits, lack of exercise, prolonged mental work, and anxiety or worry are the most frequent causes. Irregular habits, diet and drugs and the constant use of cathartics are usually exciting causes. It may also be associated with other intestinal disorders.

Symptoms—The abdomen is usually distended. A considerable amount of gas is passed, and often colicky pains are present. The symptom most prominent is absence of regular fecal evacuation. Associated with this disorder are coated tongue, bad taste in mouth, nausea, dizziness, belching of gas,

fitful appetite and irregular pulse. A large fecal mass can usually be felt on inspection and palpation.

- Treatment**—
1. Correct vertebral lesions. (The lower half of spine will usually be found the cause.)
 2. Manipulate the liver by vibration and kneading.
 3. Knead the bowels along the line of the colon.
 4. Knead the abdomen.
 5. Set the coccyx, if dislocated.
 6. Dilate the sphincter ani with a rectal dilator.
 7. Relax the muscles of the lower part of the back by proper measures.
 8. Raise the lower ribs.
 9. Extend the neck and neck muscles.
 10. Apply vibration to the spine from the first to the fourth sacral vertebra.

Diet—Drink plenty of water, buttermilk and acid beverages. Eat cooked fruits, vegetables and honey. Avoid too much starchy foods and sweets.

Cases should be treated at least twice a week.

HEMORRHOIDS OR PILES.

Definition—This is an enlarged or varicose condition of the hemorrhoidal veins and tissues around the anus, either internal or external.

Causes—Anything which obstructs the free circulation of the blood in the portal system will give rise to hemorrhoids. The use of alcoholics, on account of their irritating effect on the liver, is a predisposing cause. Constipation, straining at stool, diarrhoea and dysentery, rough toilet paper, uncleanliness, pelvic tumors, displacement of the uterus and pregnancy are among the most common causes.

Symptoms—Unless inflamed, external piles cause very little discomfort. If inflamed, the tumor is usually reddened, swollen, hard and excessively tender and painful.

The symptoms of internal piles depend upon their size and character. If protruded or ulcerated, there is a feeling of fullness and heat in the rectum, a frequent desire to empty the bowel and a dull aching pain. On account of their tendency to bleed, internal hemorrhoids are called "bleeding piles." The intensity of these symptoms is increased according to the amount and extent of the inflammation.

Internal piles are situated within the Sphincter Ani, while external piles are just at the anal margin.

Treatment—1. Relax the structures in the ischio-rectal region.

2. Correct any dislocation of the coccyx, a sub-luxation of the innominate or lumbar lesion.

3. Anoint the forefinger with ster-

ile vaseline and introduce it into the rectum with the palmar surface turned backward. Reach up and backward above the sphincter muscle and examine the coccyx. If dislocated, correct it. Then exercise considerable pressure and pulling on the muscular structures on either side of the coccyx, sideways and backward, and at the same time stretch the sphincter. Press on whatever tumors are found in the rectum, and by slow, gentle manipulation, work them until softened. In withdrawing the finger, clasp the integument with the thumb so as to offer some resistance.

4. Pressure on the sacral nerves on the outside of the sacrum will desensitize the nerves and make the internal treatment less painful.
5. Correct the constipation by proper treatment.

Treat the patient every third or fifth day.

LIVER SPOTS.

Definition—This is a pigmentation of the skin of a yellowish, brownish or black color.

Causes—It may be caused by the action of any irritant on the skin, such as blisters or follow

scratching, pressure and friction. It may be associated with visceral and general diseases, such as uterine diseases and pregnancy, malaria, tuberculosis, cancer and Addison's disease. The most common cause is pregnancy.

Symptoms—The patches are yellowish or brownish in color and are usually located around the forehead and eyelids. The patches may vary in size and shape, being either irregular or round.

- Treatment**—
1. Restore the normal circulation by manipulations.
 2. Give the liver a good general treatment.
 3. Apply vibratory movements over the surface affected.
 4. Apply stroking over the surface affected.
 5. Advise the application of hot cloths to the spots.

LIVER—GENERAL TREATMENT.

This gland is subject to many diseases primarily and very often is involved with other constitutional disorders. For this reason, a systematic outline of treatment, similar to that given below, should be followed in all cases. The order of treatment may be varied to suit each individual case.

1. Stimulate the liver by treating the upper part of the back from the sixth dorsal to the first lumbar.
2. Raise the ribs.

3. Stretch and manipulate the muscles of the chest, abdomen and dorsal region.
4. Vibrate the abdomen and liver.
5. Place the patient on the back and thoroughly knead the liver.
6. Give a deep careful abdominal treatment.
7. While the patient is sitting, stand behind him, reach around in front and as he expels air after a deep inspiration, lift the abdominal wall and press up beneath the eighth, ninth and tenth ribs.
8. Place the patient on the left side and vibrate the abdomen lying over the liver.

Advise the patient to take plenty of gymnastic exercises outdoors. Advise the drinking of large quantities of water, and prohibit the use of all liquors.

OBESITY.

Definition—An excessive development of fat throughout the body.

Causes—Heredity is supposed to have a great deal to do with this condition. An over-indulgence in carbohydrates, fats and albumins is the most frequent cause. Defective oxidation from whatever cause may frequently give rise to this condition. Beer drinkers are particularly subject to obesity, the alcohol in the beer hastening the metabolism of albumin.

Symptoms—The most prominent symptom is the increase in bulk of the patient. He may increase to such size that it interferes with locomotion, in which

case the movements are sluggish and the gait wabbling. Dyspnoea may occur owing to the respiration being interfered with by the fatty chest-wall or enlarged liver. The disorder may cause fatty infiltration of the heart-muscles and terminate in death.

- Treatment**—1. Stimulate the liver, pancreas and lymphatic system.
2. Raise the clavicles and lower first ribs.
 3. Give a thorough treatment to the spine.
 4. Apply deep kneading over the fat.
 5. Give general treatment.

Advise the patient to exercise daily and walk considerably in the open air.

Diet is very important in this disease and the following list will be found serviceable:

The patient may be allowed to take nearly all kinds of fresh fish, boiled; lean beef, mutton or lamb, chicken and game (sparingly); boiled or poached eggs on toast; stale bread, dry toast or crusts (sparingly); spinach, lettuce, celery, cresses, asparagus, cauliflower, onions, white cabbage, tomatoes, radishes, olives; ripe fruits only—acid varieties preferable; one cup of tea or coffee, without milk, cream or sugar, or one glass of pure water, sipped at end of the meal.

He must not take soups, salmon, bluefish, eels, salt fish, pork, veal, sausage, made dishes, fats, potatoes, macaroni, oatmeal, hominy, spices, rice, beets, carrots, turnips, parsnips, puddings, pies, pastry,

cakes, sugars, sweets, milk, cream, malt or spirituous liquors, beers, sweet wines, champagne.

CHRONIC NASAL CATARRH.

Definition—A chronic inflammation of the nasal mucous membrane, with more or less change in structure.

Causes—It is usually the result of repeated attacks of acute catarrh, or inhalation of irritating gases or dust. Syphilis and scrofula are also predisposing causes.

Symptoms—The nostrils feel full and secretion is increased. The secretion is usually thick and greenish, and when dropping down into the pharynx, it sets up an irritation which causes paroxysms of hawking and spitting. This is usually worse in the morning on arising. The sense of smell is more or less impaired. Hearing is lessened, due to extension of the inflammation to the Eustachian tubes. A dull frontal headache is almost constantly present. Sudden changes of temperature always cause exacerbation of these symptoms.

- Treatment**—
1. Manipulate and stretch the muscles of the back of the neck.
 2. Rotate the head in extension.
 3. Manipulate the angles of the inferior Maxillary.
 4. Vibrate the ears and temples.
 5. Manipulate the forehead.
 6. Vibrate the facial nerve.
 7. Apply pressure on the nose at the inner canthus.

8. Raise the clavicles.
9. Extend the chest muscles and ribs by deep inspiration.
10. Stretch the neck.
11. Adduct and abduct the head.

Treat three times weekly.

Prognosis must be guarded.

CHRONIC LARYNGITIS.

Definition—A chronic inflammation of the mucous membrane of the Larynx.

Causes—Repeated attacks of acute Laryngitis, catarrh involving the respiratory tract, excessive and improper use of the voice, inhalation of dust or chemicals and alcoholism. Not infrequently, gastric disturbances will give rise to this condition.

Symptoms—There is a tickling sensation in the throat, the voice is hoarse and husky, the patient is troubled with persistent cough and expectorates a thick, tenacious whitish mucus. An examination of the larynx will reveal a hyperaemic or congested condition and small granulations in certain portions of the mucous membrane. The vocal cords are reddened. Hawking is a common symptom.

- Treatment**—
1. Thoroughly relax all the tissues of the neck, both in front and back.
 2. Manipulate the tonsils.
 3. Manipulate the muscles of upper part of the chest and back.

4. Open the mouth against resistance.
5. Press the hard palate with the finger.
6. Apply vibration to the region just below the lobule of the ear, on the ninth, tenth and eleventh nerves.
7. Work deeply along the trachea and larynx.

The patient should be treated every other day.

CHRONIC PHARYNGITIS.

Definition—A chronic catarrhal inflammation of the mucous membrane of the Pharynx.

Causes—It usually follows an acute attack of Pharyngitis. Excessive straining of the voice and constant inhalation of dust or tobacco are common causes.

Symptoms—Cough is frequent and hacking in character, the voice is hoarse, tires very quickly and may be lost entirely. Sometimes there is pain on swallowing and the patient complains of a sensation as if a foreign body was lodged in the throat. In some cases, expectoration is profuse, and the thick, tenacious mucus may be tinged with blood.

- Treatment**—
1. Relax all muscles of the neck and stimulate the superior cervical sympathetic.
 2. Take off pressure from jugulars.
 3. Apply compression to the ninth and tenth nerves.

4. Vibrate the mucous membrane of tonsils and pharynx (internal treatment).
5. Depress the first ribs and raise the clavicles.
6. Give spinal treatment.
7. Manipulate the abdomen.

The patient should be treated twice a week.

EXOPHTHALMIC GOITRE.

Definition—This is a disease of the thyroid, in which the gland is enlarged, the eyeballs prominent, the pulse accelerated and muscular tremors present.

Causes—Goitre occurs more frequently in women than men and usually between the ages of fifteen and twenty-five. Heredity is supposed to underlie some cases. Predisposing causes are sudden fright, grief, anxiety and fatigue or mental shock. It often follows such diseases as rheumatism, influenza or typhoid fever. The theory advanced to-day and the most plausible cause is the irritant action upon the central nervous system of a perverted or increased secretion of the gland.

Symptoms—Enlargement of the thyroid gland, tremors, abnormal protrusion of the eyeballs and rapid heart action are common. The pulse usually varies from 90 to 160 beats per minute. Von Graefe's sign is often present. This is the inability of the upper lid to follow the movement of the eye when looking down or up. Another sign usually present is

Dalrymple's. This is a widening of the fissure between the lids. In simple goitre the enlargement is greater than in the Exophthalmic form of this disease. The enlargement is usually symmetrical, but occasionally unilateral.

The nervous symptoms present are restlessness, irritability, headache, neuralgia, insomnia and muscular weakness. Sometimes vomiting and diarrhoea occur, as well as edema of the ankles. Respiration is increased and anemia and loss of weight are common results. Albumin may appear in the urine and the quantity of urine excreted in twenty-four hours may be large.

Treatment—1. Extend the muscles of the neck.

2. Rotate the head.

3. Thoroughly manipulate the muscles of the face and neck.

4. Stimulate the vaso-motor area.

5. Elevate the clavicles and manipulate the gland upward.

6. Knead the sides of the gland.

7. Apply light, but firm pressure to the gland.

8. Raise the arm upward and backward and at the same time elevate the clavicles.

9. Relax the upper dorsal spine and keep the upper ribs raised.

10. Apply vibration just below the ear.

11. Give a general treatment.

Treatment should be given two or three times weekly.

ASTHMA.

Definition—A disease characterized by paroxysmal attacks of dyspnoea and a feeling of oppression.

Causes—This is essentially a nervous affection and is caused by some irritation on the central nervous system. It is often hereditary. Pathological conditions of the air passages, such as adenoids, polypi, nasal spurs or bronchial catarrh are probable causes. Exciting causes are dust, tobacco, pollen of plants and certain drugs. It may follow gastric disorders, especially an overloading of the stomach. Asthma is also symptomatic of hay fever, Bright's disease and affections of the heart. There is a spasmodic closure of the bronchi.

Symptoms—The onset is usually sudden or may be preceded by a feeling of oppression about the chest, chilliness, flatulence and sneezing. The attack usually comes on at night or in the early morning hours, the patient being awakened by dyspnoea. The desire for air is intense and he assumes the position which gives him the greatest relief, which is usually that of leaning forward upon his arms. The respiration is not increased in rapidity. During an attack the face becomes flushed and at times livid, the eyes prominent and the skin cold and clammy. An attack usually lasts from half an hour to several hours and terminates with the expectoration of sticky, stringy mucus. On close examination, this mucus reveals little grayish balls,

called Curshmann's spirals, which may sometimes be seen with the naked eye. The temperature is seldom elevated, but the pulse is slow and weak. At times, however, the pulse is rapid, small and irregular.

- Treatment**—1. Manipulation of cervical area, performed as follows: While both arms are strongly raised, apply pressure with the fingers on either side of the spinous processes along down the back, beginning on a level with the shoulders, or press the knee against the back while the arms are pulled strongly upward and backward, loosening the hold and lowering the pressure in the back three or four times, until the first six dorsal vertebrae are passed with the knee downward.
2. Give a general treatment.
 3. Vibrate the entire chest with hand or hands for several minutes.
 4. Raise the clavicles.
 5. Stretch the body backward while pressing along the sides of the spinous processes with the fingers.
 6. Pressure applied at the head of the first rib will relieve the most violent paroxysms.

Treat every second or third day.

HAY FEVER.

Definition—An acute catarrhal inflammation of the nasal mucous membrane and upper air passages.

Causes—Predisposing causes are: Heredity and excitable conditions of the nervous system. Inhalation of the pollen of roses, corn, wheat, grasses and rye are excitants.

Symptoms—A typical attack resembles an acute cold. There is sneezing, a clear, watery, nasal discharge, congestion of the Eustachian tubes, finally involving the larynx and bronchial tubes, difficult breathing and a croupy cough. The cough is wheezy and dyspnoea often occurs in paroxysms. These paroxysms may cease after a few days, returning again for several days or weeks and again cease, etc.

- Treatment**—
1. Remove all venous obstruction by manipulating the head and neck.
 2. Apply pressure with the fingers over the frontal sinuses, over the sinuses of the superior maxillary and ethmoidal bones and on the sides of the nose.
 3. Relax the muscles of the occiput, face and forehead.
 4. Correct any lesion in the cervical region.
 5. Vibrate the fauces, cheeks, inner

- canthi of the eyes, nares, temples, angles of the lower jaw and neck.
6. Raise the clavicles, chest muscles, arms and ribs.
 7. Apply pressure along the sides of spine, while the patient's arms are extended.
 8. Remove all pressure from the sympathetic nerve filaments in the sphincters.
 9. Open the mouth against resistance.
 10. Give deep abdominal treatment.

Treat three times per week.

CHRONIC BRONCHITIS.

Definition—This is a chronic inflammation of the mucous membrane of the larger and middle-sized bronchial tubes, in which cough and more or less expectoration are present. There is also a dry form where expectoration is entirely absent.

Causes—Usually follows an acute attack. It may be secondary to rheumatism, syphilis, gout, renal, cardiac or pulmonary diseases.

Symptoms—Cough, associated with considerable puffing or shortness of breath, is usually the most prominent symptom. The cough does not cause pain, is worse in the morning, after meals and at night. There is more or less secretion of thick, yellowish or greenish mucus, which is sometimes streaked with blood. Gastro-intestinal disorders

are not infrequently present. The tongue is coated, there are eructations of gas and the appetite is greatly diminished or lost.

- Treatment**—1. Give a general treatment to the entire body.
2. Carefully manipulate the throat and chest for the purpose of relaxing the muscles.
 3. Apply stimulation to the second, third and fourth ribs.
 4. Place the patient on a stool and elevate these ribs by pressing the thumb against the heads of the ribs and throwing the arms upward and slightly backward.
 5. Separate the first four ribs.
 6. Separate the costal cartilages by placing the fingers between them, then turning the fingers and spreading the hands at the same time.
 7. Remove obstruction to the jugular veins by raising the clavicles.
 8. Place the knee in the upper dorsal region and bring the arms of the patient up and back, the patient inhaling deeply at the same time, then exhaling as the arms are released.

CHRONIC PLEURISY.

Definition—A chronic inflammation of the pleura.

Causes—Non-absorption of fluid in the acute form of pleurisy, causing a thickening of the membrane and firm adhesions.

Symptoms—The symptoms of this disease are often masked, and the patient frequently does not remember having had an acute attack. There may be slight irregular fever, night sweats and debility. Cough is not constant and dyspnoea is usually absent. The patient is not capable of talking for any considerable length of time or in a loud voice. An examination of the chest will reveal quite pronounced deformity on the affected side.

Treatment—1. Raise the ribs and stretch the intercostal muscles.

2. Relax the spinal muscles.

3. Manipulate the muscles of the neck.

4. Apply steady pressure on the affected nerves at their exit from the spine.

5. Raise the clavicles.

6. Give a general spinal treatment, paying particular attention to the tenth, eleventh and twelfth dorsal vertebrae.

7. Stretch the body backward, at the same time pressing along the sides of the spinous processes with the fingers.

8. Treat the bowels.

Treat three times weekly.

PULMONARY TUBERCULOSIS.

Definition—This is a specific infectious disease, due to the tubercle bacillus, characterized by the formation of tubercles in the lungs, and general systemic disorders.

Causes—Tuberculosis occurs in all climates, but is most frequently met with in the temperate zone. Living in damp, improperly ventilated and overcrowded houses predisposes to the contraction of this disease. Sedentary habits or occupations favor its development and heredity is supposed to have something to do with its transmission. It is usually not transmitted from parent to child, but a history of the disease can be traced back to some generation. Any debilitating condition may be sufficient to permit of its implantation. The exciting cause is always the bacillus tuberculosis.

Symptoms—The onset of this disease may be either gradual or abrupt, in many instances coming on as an acute cold. The cough is persistent and resists all methods of treatment. There is anorexia and the patient loses weight and strength without apparent cause. The cough is worse in the morning and is accompanied by an expectoration of whitish or yellowish mucus, which is often tinged with blood. The patient usually feels nauseated in the morning and is sometimes troubled with hoarseness. At times, the patient complains of pains in the chest or a tightness across the affected area and dyspnoea. There is usually an afternoon rise of temperature, the face is flushed and night-sweats occur in most cases. These sweats are often pro-

fuse. Sometimes, the first symptom to attract attention may be hemorrhage from the lungs. The face becomes pinched, the features sharpened and the eyes sunken. The pulse rate is increased, usually running from 95 to 100 beats per minute during the early stages of the disease. As the disease progresses, all the above mentioned symptoms are exaggerated and toward the later stages, edema of the ankles occurs.

Physical Signs—Expansion over the affected area is diminished, vocal fremitus is slightly increased, the inspiration is harsh and high-pitched, and expiration is prolonged. The characteristic “cog-wheel” respiration is often present. Mucus rales are usually heard at the apexes of the lungs and sometimes at the base. Resonance, on percussion, will be found impaired.

- Treatment**—1. Vigorous treatment to the dorsal region from the first to the eighth.
2. Raise the ribs and separate them.
 3. Have the patient sit on a stool, place the knee in the back, and draw the arms upward and backward, the patient inhaling deeply at the time.
 4. Control the night-sweats by strong inhibition in dorsal region.
 5. Inhibit the cervical ganglia to slow the heart.
 6. Raise the clavicles.

7. Thoroughly relax the neck muscles.
8. Treat the abdomen.
9. Relieve pressure and treat indications.

Advise light outdoor exercise and living out in the open as much as possible.

Diet—The patient may be allowed to take: Turtle or oyster soup, mutton, clam or chicken broth, puree of barley, rice, peas, beans, cream of celery or tomatoes, whole beef tea, peptonized milk gruel; all kinds of fresh fish boiled or broiled, oysters or clams, raw, roasted or broiled; eggs in every way except fried; oatmeal, wheaten grits, mush, hominy, rice, whole wheat bread, corn bread, milk toast, biscuits, muffins, gems; potatoes baked, boiled or creamed, string beans, spinach, onions, asparagus, tomatoes, green peas, all well cooked, cresses, lettuce, plain or with oil dressing, celery; farina, sago, tapioca, apple or milk pudding, custards, baked or stewed apples with fresh cream, cooked fruits, rice with fresh cream; fresh milk, cool, warm, or peptonized, cocoa, chocolate, buttermilk, pure water, tea, coffee. He must not take any of the following: Fried foods, salt fish, hashes, gravies, veal, pork, carrots, parsnips, cabbage, beets, turnips, cucumbers, macaroni, spaghetti, sweets, pies, pastry, sweet wines.

HERNIA.

Definition—The term “hernia” or “rupture” is given to any abnormal opening in the walls of any cavity of the body which permits portions of retained organs to escape into or through it. It is

most frequently applied, however, to openings into or through the walls of the abdominal cavity. Three forms are usually recognized, inguinal, femoral and umbilical.

Causes—The predisposing cause is an imperfect closure of the internal ring. There are many exciting causes, among which muscular weakness of the abdominal walls and violent exercise are most common.

Symptoms—The patient first notices a swelling in the region affected. The tumor is seldom painful and varies in size with the position of the body. It generally disappears in the recumbent position. By placing the hand over the swelling and asking the patient to cough, an impulse is usually felt. A gurgling sound is usually heard when the bowel returns within the cavity.

The symptoms of strangulated hernia are pain, rapid pulse, vomiting, obstruction and irreducibility and an anxious look on the patient's face. If not reduced, this condition causes death.

TREATMENT FOR STRANGULATION.

Place the patient on the back with the shoulders lower than the body. Raise the pelvis and flex the limb on the side of the rupture. Strongly flex the leg on the thigh, the thigh on the abdomen and at the same time press around the hernia in the groin with the fingers of the other hand. Flexing one or two times usually reduces the hernia.

TREATMENT FOR THE CURE OF HERNIA.

Patient on back. Knead the muscles of the ab-

domen, while the legs are flexed. Free the lumbar nerves.

Treat three times weekly. A cure can be effected in about 40 per cent of all cases.

SPINAL CURVATURE.

Definition—Scoliosis or Rotary Lateral Curvature of the Spine is a complicated distortion in which the spine forms two or more lateral curves, with their convexities in opposite directions.

Causes—The most prominent cause in the acquired form of this disease is the faulty position which the child habitually assumes either in walking, sitting or standing. Rapid growth, structural weakness of the ligaments and bones, heredity, rickets, a strumous diathesis and general debility are often underlying causes.

Symptoms—Premonitory symptoms are general lassitude, pain or a feeling of weakness in the back and a stooping gait. The first symptom usually noticed is a slight projection of the scapula. The right shoulder is generally elevated and the angles of the right scapula, right iliac crest and left breast are prominent. On account of the backward projection of the processes of the left lumbar vertebrae, the left lumbar muscles stand out as a prominent ridge.

Treatment—Same as for Pott's disease.

Lordosis is a curving of the spine in which the convexity is forward.

Kyphosis is a curving of the spine where the convexity is backward.

The causes, symptoms and treatment of these conditions are similar to lateral curvature.

POTT'S DISEASE—CARIES OF THE SPINE.

Synonyms—Tuberculosis of the spine, spinal curvature, spondylitis and caries of the spine.

Definition—A progressive inflammation of the spine, characterized by partial or complete destruction of the bodies of the vertebrae and their cartilages, thereby giving rise to deformity.

Causes—It is met with most frequently in childhood, the greater number of cases occurring between the ages of three and ten. It may, however, occur at any age. In the majority of cases a history of injury will be found the cause. It often occurs among children of the poorer class, especially where tuberculosis is hereditary. It may follow many acute infectious fevers. In late life it usually follows rheumatism or osteoarthritis.

Symptoms—These vary greatly and are influenced by conditions present. Pain is the most prominent symptom and is nearly always referred to the distribution of the spinal nerves. It is worse after standing or after exertion. There is tenderness on pressure, and rigidity of the back and a sense of weakness. The deformity depends upon the amount of destruction.

- Treatment**—
1. Relax the muscles of the spine.
 2. Suspend the patient by the arms.
 3. Adjust the vertebrae properly, by beginning at the lowest one which is out of position, force it over and then work on the next in order and so on.
 4. Strengthen the spinal muscles by

manipulation, as well as the ligaments.

5. Give general and spinal treatment.

CHRONIC BRIGHT'S DISEASE.

Definition—A chronic inflammation of the kidneys affecting their cortical and tubular structures and characterized by albuminuria and dropsy, and enlargement of the organs.

Causes—Usually follows an attack of acute Bright's disease. It may be caused by intemperance, living in damp and ill-ventilated houses, grief or worry, and frequently follows malaria, syphilis or scrofula. It is often met with among poorly fed and half-clad persons. It rarely occurs after the age of forty.

Symptoms—The first symptoms noticed are frequent desire to urinate, swelling of the face or extremities, increasing pallor and general debility, and headache, which is usually confined to the occipital region. As the disease progresses, cardiac palpitation, dizziness and difficult or defective vision occur. The urine is scanty, high-colored and of unchanged specific gravity. It is less acid and shows the presence of albumin and tube-casts. The amount of albumin may vary from day to day and in many cases it may disappear for a short time. An irritable bladder often accompanies this disease. The only constant and characteristic manifestations are the profound and increasing anemia and the presence of albumin and tube-casts in the urine.

In interstitial nephritis or contracted kidney, the

symptoms are practically the same, excepting the urinary findings. The specific gravity is low and an inconsiderable amount of albumin is present. Dropsy is usually absent.

- Treatment**—1. Correct the spinal lesion usually present from the tenth dorsal to the second lumbar vertebra.
2. Relax all muscles in this region as follows: Place the patient face downward and apply steady pressure upward and downward on the muscles in the dorsal and lumbar regions.
 3. Stimulate the sacral nerves.
 4. While applying steady pressure on the spine with one hand, oscillate the limbs from side to side with the other.
 5. With the patient lying on his back with legs and thighs flexed, place the fingers under the spine and lift him on finger-tips.
 6. Give a thorough abdominal treatment at or above the umbilicus.
 7. Regulate the action of the liver and bowels.

Treat three or four times weekly.

ENURESIS.

Definition—Incontinence of urine.

Causes—This condition is most common in children, especially in males. It seldom occurs after puberty. Congenital weakness of the sphincter mus-

cle, acid urine, polyuria, prepuccial adhesions and phimosis are common causes, and menstruation, indigestion, constipation and intestinal worms frequently give rise to this disorder.

Symptoms—An involuntary discharge of urine usually occurs at night during the first sleep, or in the early morning.

Treatment—Place the patient face downward on a table or couch and take hold of both ankles with one hand. Place the other hand on the sides of the spinous processes of the sacrum, and while pressing hard against the sacrum, raise the feet and move them from side to side and then lower them to the level of the body. Repeat the same process and place the fingers a little higher up the sacrum each time, until the whole lumbar region has been covered.

Use vibratory upward movements on the sacrum.

DIABETES MELLITUS.

Definition—This is a constitutional disorder arising from malnutrition, characterized by an excessive flow of urine containing sugar.

Causes—Diabetes may occur at any age, but is most common in adults, males and the well-to-do. Diseased conditions of the liver and pancreas are supposed to be underlying causes. Among the predisposing causes may be mentioned high living, the excessive use of carbohydrates, physical and mental overwork, nervous excitement and pregnancy. It not infrequently follows such diseases as Malaria, Influenza and Gout.

Symptoms—These usually appear gradually, and the patient is not aware that he is suffering from

Diabetes until he has had his urine examined for some reason or other. The first symptom noticed is the large amount of urine passed and its frequency. Accompanying symptoms are thirst, which is usually great, weakness and debility and a gradual loss of weight. Headache is often present, the patient is irritable and subject to insomnia. There is a disordered digestion, although digestion may remain good.

The urine has a high specific gravity, usually from 1.025 to 1.060, and is of a pale color. Sugar is present in varying quantities, usually from $\frac{1}{2}$ to 2 per cent. The total amount excreted in twenty-four hours may reach a pound. If the urine is allowed to stand it does not decompose, but becomes turbid. The quantity of urea is increased. Albumin may be present.

Treatment—Manual and Dietetic.

1. Begin by giving a general treatment.
2. Correct lesions between the eighth dorsal and second lumbar vertebrae.
3. Give strong inhibitory treatment to the spine from the lower dorsal to the sacrum, also in the region of the bladder and ischio-rectal fossa.
4. Flex the legs and thighs.
5. Spring the spine forward while the legs and thighs are flexed.
6. Apply pressure to the spine in the dorsal and lumbar regions, while

lifting the shoulders and throwing them backward. The patient should assume the sitting posture during this movement.

7. Vibrate the spine.

Every case must be treated individually and according to indications.

Diet.—1. The patient may be allowed to take soups of all kinds (not thickened with any farinaceous substances) and beef tea.

2. Shell fish and all kinds of fish, fresh, salted, dried, pickled or otherwise preserved (no dressing containing flour).

3. Eggs in any way most acceptable.

4. Meats of all kinds, excepting liver (all cooked free of flour, potatoes, bread or crackers).

5. Gluten bread and cakes, also bran bread and cakes.

6. Vegetables: String beans, spinach, beet-tops, chicory, kale, lettuce, plain or dressed with oil and vinegar, cucumbers, onions, tomatoes, mushrooms, asparagus, oyster plant, celery, dandelions, cresses, radishes, pickles and olives.

7. Desserts: Custards, jellies, creams (without sugar), walnuts, almonds, filberts, Brazil nuts, coconuts and pecans.

8. Drinks: Tea or coffee (without sugar), pure water, peptonized milk.

9. **MUST NOT TAKE** sugars, sweets or starches of any kind, wheaten bread or biscuits, corn bread, oatmeal, barley, rice, rye bread, arrowroot, sago, macaroni, tapioca, vermicelli, potatoes, parsnips, beets, turnips, peas, carrots, melons, fruits,

puddings, pastry, pies, ices, honey, jams, sweet or sparkling wines, cordials, cider, porter, lager, chestnuts and peanuts.

Prognosis—Unfavorable, but life may be lengthened by proper care.

RHEUMATISM—ACUTE AND CHRONIC.

Definition—A constitutional disease characterized by inflammation of the connective tissue structures of the body, especially the muscles and joints, and attended by pain, acid sweats and a tendency to endocarditis.

Causes—Predisposing causes of this disease are debility from overwork, bad food, unsanitary surroundings and malaria. Exciting causes are exposure to cold and wet causing a sudden chilling of the surface of the body, especially when over-heated. Heredity is believed to exercise a certain influence. Robust middle-aged males are oftenest affected, particularly those most exposed to vicissitudes of weather.

Symptoms—Anorexia, dyspepsia, malaise and wandering pains may precede an acute attack for two or three days, but the onset is usually sudden. An attack is commonly ushered in with a chill or chilly sensations, the temperature rises rapidly, the thermometer indicating an elevation of from 103° to 104° F., within twenty-four hours. The tongue is coated and the patient complains of headache. The pulse is full and soft and seldom exceeds 100 per minute. The patient perspires profusely and the skin is covered with acid sweat. The urine is scanty, and on standing it deposits a considerable amount

of urates. An eruption of miliaria often appears on the surface. There is swelling, redness and pain and the affected parts are very tender to the touch. The large joints are most apt to be involved, such as the knee, ankle, shoulder, wrist and elbow, but the fingers and toes may be implicated. The inflammation has a tendency to subside in one joint and appear simultaneously in another. Endocarditis is liable to develop.

In the chronic form, the symptoms come on gradually, there is slight soreness and stiffness, noticed more particularly during damp and cloudy weather or on the day following some laborious occupation. There is slight tenderness on pressure, but the joints are only slightly swollen and are not red. Suffering is worse at night. Febrile symptoms are rarely present.

An attack of muscular rheumatism usually comes on suddenly, with pain in the affected muscles, tenderness and considerable stiffness, making movement difficult and painful. Hyperexia is usually absent. The causes are practically the same as in the other varieties of rheumatism.

General treatment in all forms of rheumatism :

1. Give a general treatment.
2. Thoroughly manipulate the neck, spine, shoulders, clavicles, chest-muscles and vaso-motor area.
3. Begin where the slightest or no soreness is present and knead the tissues.
4. Treat the kidneys, liver and intestines.
5. Manipulate the joints gently.
6. Correct any spinal lesions.

7. Separate the ribs.
8. Apply steady pressure over affected nerves.
9. Carefully stretch the joints to allow better circulation.
10. Relax the muscles in the dorsal and lumbar regions.

Apply cold compresses or hot fomentations.

Treat two or three times daily in acute form, two or three times weekly in chronic.

RHEUMATOID ARTHRITIS.

Definition—An inflammation of the joints, causing enlargement and deformity of various articulations.

Causes—Bad hygiene, exposure, tubercular diathesis, frequent pregnancies and prolonged lactation, grief and the menopause. It often follows attacks of articular rheumatism. It is more frequent in females than males, and in the weak and anemic.

Symptoms—The acute form involves several joints at a time and slight fever may be present, while in the chronic stage only one joint is affected at the same time. Each joint is subject to recurrent attacks. The joint enlarges slowly, and movement causes pain. After a time the redness and tenderness disappear and the articulation becomes rigid or slightly movable. Crepitation can often be felt. The hands are usually involved, but the disease may spread to every joint.

Treatment—1. Give a general treatment.

2. Correct any spinal lesions present.

3. Manipulate the nerves to the joints and thoroughly massage the surrounding structures to bring

about absorption and assist in drainage.

4. Equalize the circulation by proper treatment.
5. Flex and extend the affected joints.

Hydrotherapy in the form of hot full baths can be used with some benefit.

Prognosis—Guarded. Very often incurable.

GOUT.

Definition—Gout is a constitutional disease, characterized by an excess of uric acid or alkaline urates in the fluids of the body.

Causes—It is most frequent in males and middle or advanced life. Heredity seems to have some influence in this disease. The principal causes are riotous living, over-indulgence in spirituous and malt liquors, and an inactive life.

Symptoms—The disease usually commences with an acute attack, as the result of inactivity of the liver, or of indigestion. It usually comes on with sharp shooting pains through the joints, especially when the limbs are flexed. The patient is irritable and suffers greatly from the pain and inflammation. The pain is severe in the great toe, this member becoming swollen and inflamed and very tender to the touch. The temperature is increased, usually between 101-103° F. All symptoms seem worse in the early morning hours. The symptoms subside during the following day and reappear the next morning and may recur in this manner for several days. The urine shows a deposit of "brick-dust"

colored crystals of uric acid and urates. All symptoms gradually subside and may not recur again for a long time, or the joints may become filled with chalky deposits and cause deformity or immobility and the disease takes on a chronic form.

- Treatment**—
1. Give a general treatment.
 2. Stimulate the kidneys.
 3. Treat the spine, especially at the lower and lumbar regions.
 4. If the great toe is painful, begin the treatment in the lower part of the back and work slowly, carefully and thoroughly down the limb to the toe.
 5. Gently manipulate the joint from side to side and carefully stretch same.
 6. Assist in re-establishing proper circulation by manipulating and moving all the tissues to the bone.
 7. Instruct the patient to bathe frequently. If the patient is strong, advise cold baths in the morning, followed by vigorous rubbing with a coarse towel.

The patient should be treated at least three times a week.

SCIATICA.

Definition—A painful affection of the sciatic nerve. Neuralgia of the sciatic nerve.

Causes—Predisposing causes are rheumatic diathesis, diabetes and some of the infectious diseases. Exciting causes are exposure to cold or wet heavy

muscular exertion, injuries to the nerve, pressure of tumors and constipation.

Symptoms—The most prominent symptom is pain along the course of the sciatic nerve. The pain is usually paroxysmal and is sharp and lancinating and increased by motion. The pain may be confined to a part of its course only. It comes on suddenly or gradually. The nerve is very tender along its course and particularly at the sciatic notch. Slight fever may be present during the acute stage, and also numbness.

- Treatment**—
1. Relax all muscles in the lumbar region.
 2. Rotate the thigh inward in the following manner: Flex the leg on the thigh and take hold of the ankle. Hold the knee and turn the leg so as to rotate the thigh.
 3. Flex the thigh on the abdomen and the leg on the thigh, then straighten the leg, while thigh is still flexed. This stretches the sciatic nerve.
 4. Manipulate the popliteal space.
 5. Apply pressure with the thumbs on the sides of the spines of the lower lumbar vertebrae.
 6. Deeply manipulate all the muscles of the hip and upper portion of the thigh.
 7. Flexion, extension, adduction and abduction of the lower limbs should be performed.

8. Vibrate the dorsal, lumbar and gluteal areas.

Treat every other day. Every day in severe cases.

TORTICOLLIS.

Definition—Wry neck. This is an affection due to a contraction of the sternocleido-mastoid muscle, causing a twisting of the head.

Causes—This condition may be either congenital or acquired.

Congenital wry neck is usually noticed soon after birth. Its origin is not certain, but is supposed to be due to a rupture of the muscle at the time the infant is born.

The acquired form may be the result of rheumatism or exposure to cold. It may also arise as a symptom of inflammation of the lymphatic glands, the vertebrae or other structures of the neck.

Symptoms—This condition is not difficult to recognize. Usually the only symptom present is the stiffness on one side of the neck and inability to straighten the head.

- Treatment**—
1. Thoroughly relax all muscles and tissues of the neck.
 2. Place one hand on the sternocleido-mastoid muscle near the entrance of the eleventh nerve, and with the other hand turn the neck as far as possible each way.
 3. Rotate the head under tension.

Prognosis—Good in recent cases. Cases of long standing are incurable.

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